



THE CHEMIST AND DRUGGIST

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1852
NUMBER

TELEGRAPHIC
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42 Cannon St.
E.C.

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MELBOURNE
and
SYDNEY.

ENGLAND - 1859.

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franco.

Abonnementspreis: The Chemist and Druggist
einmal wöchentlich, und Notizkalender des
Chemist and Druggist einmal im Jahre, 10 Mark
jährlich, frei in's Haus geliefert.

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una vez por semana, y el Agenda del Chemist and
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JAMES WOOLLEY, SONS & CO., Ltd.

MANUFACTURERS OF

SPIRIT OF NITROUS ETHER

(Prepared by Distillation, and Guaranteed when sent out to Answer the
Official Tests).

AROMATIC SPIRIT OF AMMONIA

(Made from Volcanic Ammonia).

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MEDICATED BOUGIES, PESSARIES, AND SUPPOSITORIES; TINCTURES, FLUID EXTRACTS, &c.

TASTELESS COATED PILLS

(With Pearl Coating, White, Pink, or Yellow. Soluble in Cold Water).

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(Flexible and Non-collapsible).

SOLUBLE FLAVOURING ESSENCES.

(Used in the Manufacture of Aerated Beverages, Cordials, &c.).

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MANCHESTER.

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Warehouse, Offices, and Showrooms: VICTORIA BRIDGE,

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(REGISTERED).

— A Nourishing Meat & Malt Wine.

Strongly recommended by the Medical Faculty in all cases of weakened constitution, and particularly useful in cases of ladies
whilst nursing, and delicate children, or in ailments where a stimulating—digestive—tonic—nutrient is indicated.

Dose—A Quarter to Two Ounces twice daily.

In Bottles, 2s. 6d., 5s., and 7s. 6d.

HOOPER & COMPANY,

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55 Grosvenor Street, & 26 Davies Street, W.; also at 7 Pall Mall East, London.

LABORATORY: MITCHAM, SURREY.

Also, as supplied to H.M. The Queen and the Élite of the Aristocracy,

HOOPER'S SPARKLING SELTZER

2s. 6d. per dozen. Six dozen Carriage free.

* PURE SODA, PURE POTASH, LEMONADE, AND AROMATIC GINGER ALE. *

SPECIAL TERMS FOR QUANTITY.

The Chemist & Druggist

SUPPLEMENT

SATURDAY, JANUARY 2, 1897.

Businesses Wanted
Businesses for Disposal
Premises to Let
Auction Sales

ALSO EXCHANGE COLUMN.
For Bargains see the last page of this Supplement.

Partnerships
Situations Vacant
Situations Wanted
Miscellaneous

A Copy of this Supplement is inserted in every number issued of "The Chemist and Druggist."

The Man who pays 1/- or 3/6

for an advertisement in this Supplement has to pay cash; so he becomes an exceptionally critical person in respect to the value of the advertisement.

That is a fair statement. Now, what do we find? Advertisers tell us their results—ten, twenty, thirty or more replies, summed up in the five words—"Suited; don't repeat the ad." And alongside that there is the fact that this Supplement has grown from a modest thing with a dozen advertisements in it to the present proportions.

The growth has been as gradual as phenomenal, which is the best proof that it is based on a sound foundation—extensive circulation and quick returns. When you want to advertise, please remember

"The Chemist and Druggist" Supplement.

CHEMISTS' TRANSFERS.

MESSRS. ORRIDGE & CO., 32 LUDGATE HILL, E.C.

May be consulted at their Offices on matters of SALE, PURCHASE, and VALUATION.

VENDORS have the advantage of Messrs. O. & Co.'s direct attention and advice as to value without additional fee.

PURCHASERS are invited to forward a statement of their requirements, which will be notified in a register free of charge.

VALUATIONS having always been a prominent feature, Messrs. O. & Co. trust that the lengthened period during which they have enjoyed the confidence of the profession will be regarded as a sufficient proof of the sincerity of their endeavours to conduct these transactions in an honourable and straightforward manner.

1.—£1,000.—**LONDON, W.** (Illness cause of sale).—Dispensing and Retail Business; returns average £1,000 yearly, *with large profits*; capital residence, held on long lease; price about £750.

2.—£650.—**LONDON (Main road)**.—Old-established Business, chiefly ready money; returns £650 per annum; *net profit about £300*; handsomely-fitted shop and good stock; convenient residence, on lease; valuation about £500.

3.—£500.—**LONDON (Good-class suburb)**.—Light Retail and Prescribing Business, situate in main road; returns present rate £500 yearly, *increasing*; house contains 6 rooms and cellar, with large garden; price £300.

4.—£400.—**CHISWICK**.—Old-established Business; Retail, Prescribing, and a little Dispensing; returns about £400 yearly; can be largely increased; well-fitted shop and good stock; the business is situate in busy main thoroughfare; good house and garden; lump sum or valuation: offer wanted.

5.—£400.—**LONDON, S.E.**—General, Retail Business, situate in main road; returns exceed £400 yearly; *net profit* £150; convenient residence, held on lease; price £250.

6.—£450.—**LONDON**.—Neglected Business, situate in market locality; returns, present rate, £450 per annum; corner shop, double-fronted; commodious premises, held on lease; no reasonable offer refused.

7.—£1,000.—**HYDE PARK**.—First-class Dispensing Business; splendid position; returns exceed £1,000 yearly; handsomely-fitted pharmacy and well-selected stock; the house is large and convenient; price about £1,000.

8.—£1,100.—**PLYMOUTH (near)**.—Old-established Business; no opposition in the drug trade; returns exceed £1,100 yearly; *profits very good*; the shop has double front and is well fitted in mahogany, &c.; price £550.

9.—£3,000.—**MIDDLESEX**.—Well-established Business, Retail and Dispensing; returns £3,000 yearly; *net profit large*; the shop is handsomely-fitted and well-stocked; commodious residence, held on lease; further particulars on application.

10.—£500.—**SURREY (Large Town, Main Line)**.—Ready-money Retail; returns about £500, *very profitable*; very well-appointed roomy shop and convenient house; about £400 only required.

11.—£550.—**STAFFORDSHIRE**.—General Retail Business, situate in leading thoroughfare; returns £550 yearly; *very profitable*, being largely from proprietaries; well-fitted shop; very moderate rental; valuation of stock and fixtures only required; illness cause of sale.

12.—£750.—**NORTH OF ENGLAND**.—Good-class Retail Business, main road; returns £750; the shop is handsomely fitted in mahogany, stock large; good residence; valuation about £750.

13.—£800.—**ESSEX**.—Old established Business, Retail, Dispensing, and Dentistry; returns £800 yearly; *net profit* £300; the shop is well-fitted, stock large; capital house, 21 years' lease; rent £45; price £700.

14.—£750.—**BATH**.—Good-class Business, Retail and Dispensing; returns £750; handsomely-fitted pharmacy, stock good; valuation of stock and fixtures only required; vendor retiring.

Particulars of any of the above will be furnished on application.

N.B.—NO CHARGE TO PURCHASERS.

TERMS FOR VALUATION ON APPLICATION. APPOINTMENTS BY POST OR WIRE HAVE IMMEDIATE ATTENTION. Messrs. ORRIDGE & Co. invite communications from COLONIAL and FOREIGN firms where business of a confidential nature requires the especial attention of a London Agent.

SPECIAL NOTICE.—Messrs. ORRIDGE & CO. have a large number of Businesses for Sale suitable for Gentlemen with Small Capital, from £200 to £500.

ORRIDGE & CO., 32 LUDGATE HILL, LONDON, E.C.

F. J. BRETT

VALUER,

37 Waterloo Street, LEICESTER.

References to Principal London and Provincial Wholesale Houses, also to numerous clients throughout the United Kingdom.

BUSINESSES THOROUGHLY INVESTIGATED FOR BUYERS. NO CHARGE TO BUYERS.

£900 returns.—**MIDLANDS**.—General Mixed trade, doing about £1,500 under personal attention, and could again; price £600.

£500 returns.—**LONDON, S.E.**—Profitable Light Retail with good Prescribing; main road to City; price £300.

£800 returns.—**LONDON**.—Light Middle-class Retail; under management; house; rent £30; satisfactory reason for sale; price £550.

£900 returns.—**LONDON, N.**—Very handsomely-fitted and spacious Pharmacy; good-class Retail; private entrance to house; net profit £300; price £800, about value of stock and fixtures.

£550 returns.—**LONDON, N.**—Dispensing and Light Retail, with exceptional proprietaries; one returns about £100, and capable of great development; long lease; at valuation about £400.

£700 returns.—**LONDON**.—Good Middle-class Retail, with plenty of scope for energetic man; good house; rent £40; price £400.

£750 returns.—**WESTERN CITY**.—First-class Retail and Dispensing; desirable opportunity for young man; vendor retiring after 40 years' occupancy.

£300 returns.—**ISLE OF MAN**.—Light Retail in good town; as vendor is leaving the Island, will accept £150 from cash buyer.

£700 returns.—**LANCASHIRE**.—General Mixed Retail in manufacturing town; net profit £200; price £500.

£700 returns.—**LANCASHIRE**.—Light Retail, in best position of large town; any amount of business could be done by up-to-date man; price £650.

£500 returns.—**LIVERPOOL**.—Light Retail and Dispensing, in good residential part; price £350.

£1,700 returns.—General Retail, in suburb of large Midland town; under personal supervision a large trade can be done; price £700.

£500 returns.—**MON.**—Light and profitable Retail in small country town; fair house; rent £26; can have lease; price £200.

WANTED, good-class Retail in Northern town; net profit £300.

WANTED, first-class Retail and Dispensing; lock-up shop not objected to; net profit £500 or over.

WANTED, good Business, returning about £1,000, where £600 or £700 can be invested.

BERDOE & CO.

CHEMISTS' TRANSFER AGENTS AND VALUERS,

35 JEWRY STREET, FENCHURCH STREET, E.C.

Established 1870.

VALUATIONS:

SPECIAL ATTENTION is paid to Valuations, which are personally conducted by a member of the firm, in any part of the United Kingdom. Our terms, which are moderate, may be had on application.

1.—**CAMBRIDGESHIRE**.—Retail and Prescribing Business; returns £400 as a branch; rent £30; must be sold at once, and first offer of £120 will secure it, less than valuation.

2.—**GLOUCESTERSHIRE**.—Unopposed Business, Light Retail and Prescribing; returns £700; rent £26, good house; shop is well fitted and stocked; price £450 or offer.

3.—**MIDLANDS**.—Retail, Dispensing, and Prescribing Business; returns £800; net profit £300; low rent; good house; shop is well fitted and stocked; price £600 or offer.

4.—**SOUTH COAST**.—Old-established Retail and Dispensing Business, returning £800 at full price; if modern system of trading was introduced would do £2,000; price £650.

5.—**SURREY (Banks of Thames)**.—Retail and Prescribing Business; returns over £300; patents almost nil; good house and garden; low rent, on long lease; price £150.

6.—**LONDON, W.**—Death vacancy; Retail and Prescribing Business; same hands 20 years; returns £520; net profit £250; price £150 or offer; an extraordinary bargain.

NOTICE TO VENDORS.

Messrs. BERDOE & CO. desire to inform intending vendors that they have a number of clients unsuited desirous of purchasing for cash businesses in London, country, and at the seaside, returning £500 to £3,000.

Gentlemen placing businesses in our hands have the advantage of direct personal attention and over 26 years' practical experience, we being frequently enabled to sell a business to the first client we introduce, and without a single advertisement being necessary. Correspondence invited. Terms sent on application. Transfer and Valuation Offices,

35 JEWRY ST., FENCHURCH ST., CITY.

JUDD & MANNERS

(SUCCESSORS TO CROOKER & CO.)

Trade Valuers, Transfer Agents, & Accountants,
76 CANNON ST., LONDON, E.C.
(ADJOINING CANNON STREET STATION).

YORKSHIRE.—Manufacturing town, Retail and Prescribing; returns £1,200; price £300; goodwill and valuation; low rent, long lease.

MIDLANDS.—Pleasant market town; returns £650; price £800 or offer; good house at a moderate rental; nice garden, &c.

NORTH LONDON.—Retail, Dispensing, and Prescribing; returns £14 weekly; price £5.0; this is a good chance for a pushing man.

LONDON.—An old-established Wholesale Business, with valuable Specialities; capital required to purchase £6,000; all applications for particulars must give reference.

Full particulars of any of the above sent free on application.

VALUATIONS A SPECIALITY.

FERGUSON & OSBORNE

PHARMACEUTICAL CHEMISTS,

CHEMISTS' VALUERS AND TRANSFER AGENTS.

25 YEARS' PRACTICAL EXPERIENCE.

NO CHARGE TO PURCHASERS.

ALL VALUATIONS AND STOCKTAKINGS are conducted personally by the Principals. Terms on application.

1.—**SOUTH COAST**.—Sound Retail and Prescribing; corner position; good family house, garden, &c.; returns £750; low rent; price £580.

2.—**CHANNEL ISLANDS**.—Family and Dispensing; central position; legal qualification not necessary at present; price £650; particulars on application.

3.—**ABOUT 2 MILES FROM CITY**.—Handsomely-fitted Pharmacy; family house, with private entrance; returns about £700; price £380.

4.—**CITY (Leading street)**.—Returns about £900; price £525; low rent.

5.—**LONDON SUBURB**.—Returns over £1,100; price £600.

6.—**ISLE OF WIGHT**.—Nice Retail, with good house; price £85. Bedfordshire, price £250; Hastings, price £220; Swausea, price £200; Dorset, price £320; Hants, £200; Brighton, £450; Camberwell, price £350; Devon, price £175; Kent, price £700.

56 CHEAPSIDE, LONDON, E.C.
(Next Door to Bow Church.)

THOMAS TOMLINSON & SON,

Chemists' Transfer Agents and Valuers,

9 NEW CANNON STREET, MANCHESTER.

42 YEARS' EXPERIENCE.

Valuations Conducted with careful attention to detail.

BUSINESSES FOR DISPOSAL, of various sizes and classes, in Weston-Super-Mare, Manchester (5), Liverpool (4), Leeds (2), Birmingham, Sheffield, Bradford, Preston, Accrington, Bury, Burnley, Nottingham, Clough Fold, Crewe, Swinton, Bolton, Penmaenmawr, Barrow-in-Furness, Bury St. Edmunds, Jersey, Oldham, Heywood, Prescott, South Wales, Cheshire, Dewsbury, West Bromwich, Blackburn, Stockport, Hyde, Chesterfield, Uxk, and other towns.

Particulars free to bona-fide applicants stating locality, size, and class of Business required.

NO CHARGE TO PURCHASERS.

Telegraphic Address—"TOMTOM."

PARTNERSHIPS.

3s. 6d. for 50 words or less; 6d. for every 10 words beyond.

PARTNERSHIP or other arrangement wanted (by a Medical man) in a good neighbourhood, where consultations and treatment by Medical Electricity would be an advantage. Summer, 138 Lavender Hill, S.W.

PARTNERSHIP.—Wanted, steady, energetic, qualified man as Partner in a well-fitted Pharmacy in a busy thoroughfare of a Northern town; capital necessary £350; he must be about 26 years of age, and have good references. Apply, letter, J. D. (206/27), Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

BUSINESSES FOR DISPOSAL

3s. 6d. for 50 words or less; 6d. for every 10 words beyond.

OLDBURY.—Our Retail Business, established 40 years, is for Disposal. Apply, Parish & Son, Wholesale and Retail Druggists, Oldbury.

ABERDEEN.—Drug Business for Sale; Wholesale and Retail; old established; stock fresh and under £1,000; Partnership might be arranged. Further particulars to John Craigen, Solicitor, Aberdeen.

FOR Disposal, Business in pleasant Suburb, with Post-office which pays rent; returns £500; scope for increase to an energetic man. Apply, 216/17, Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

WORCESTERSHIRE.—Market town; good-class Business; handsomely fitted; best position; net profits about £300; price £550; good house; small garden; particulars with references; no agents. "Chemist," Wyleys & Co., Coventry.

LONDON, N.E.—Old-established Retail; several proprietary articles; in main thoroughfare; would suit energetic man; present proprietor relinquishing; moderate rent; price about £400 or offer. Apply, S. £22/18, Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

LONDON, W.—Light Retail and Prescribing Business, returning £10 weekly under management; profit 75 per cent.; capable of doing £15 under principal; 8-roomed house, on lease; price £200 or valuation. "Exor," 227/29, Office of THE CHEMIST AND DRUGGIST, 42 Cannon St., E.C.

A GOOD Dispensing Business, in a rapidly growing Liverpool suburb; an exceptional opportunity for an energetic man; returns between £500 and £600; good premises, on lease; price moderate. Apply to "Nemo" (201/19), Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

SMART Retail Cash Business, in the central position of an important town in Lancashire, returning over £1,100 per annum for the last three years; well fitted up and stocked, and will bear thorough investigation; price £750. Apply, 216/14, Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

MIXED Business for Sale; corner shop, good house, populous working-class neighbourhood in large, prosperous Lancashire town; nearest qualified Chemist half-mile away; price £75; bargain for qualified man. Address, "Unqualified" (208/33), Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

25 MILES from London, pretty part of Surrey, a good-class Light Retail and Dispensing Business, returning £600, increasing; capable of doing £900; excellent house and garden; extremely low rent, on lease; price £525. "Pharmacy" (220/17), Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

FOR DISPOSAL.—Family, Dispensing, and General Drapery Business; established 1797; in same hands 36 years; lock-up shop; large premises in principal street of Lancaster; average returns £1,500; price £750; capable of considerable increase under proper management. Apply, W. Hall, Chemist, Lancaster.

SOUTH WALES.—A Ready-money Retail and Prescribing Business, in a rapidly-improving town; returns £1,000, fast increasing; net profit £400, after payment of all expenses; large well-fitted shop, and well stocked; good house; price £750. S. W. (227/30), Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

TO Surgeons or Chemists.—An attractive well-fitted Pharmacy in a thickly-populated neighbourhood near Kenington Park, doing profitable ready-money returns (has formerly been carried on successfully by Surgeon for many years), to be sold solely through illness. Apply, Mr. Beddard, 46 Churton Street, Belgrave Road, S.W.

FOR SALE.—Warwickshire, in large town, good Business; handsome corner shop; returns £1,260; good profits; Dentistry attached; very few patents, only £200; satisfactory reasons for Disposal; modern house; price £950; part can remain on approved security. Full particulars, &c., to "Delta," Messrs. Southall Bros. & Barclay, Birmingham.

FOR Sale, an old-established Business in a market town 20 miles from London; in hands of present proprietor 30 years; returns from £250 to £300; can be greatly increased by personal supervision; double-fronted shop; 6 years' lease; proprietor relinquishing business. Apply, M. J. L. (227/16), Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

MIDLANDS—Market town; population about 9,000; good-class Retail, Dispensing and Prescribing business; returns £650; large shop, well fitted and stocked; convenient 10-roomed house and large garden; price £510; satisfactory reasons for leaving. "Vernon" (220/18), Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

£500.—For immediate Disposal, Stock, Fixtures, and Goodwill of old-established Chemist's Business, in Southern seaside health resort; excellently situated; good house, low rental, and long lease, or house may also be purchased. For fullest particulars address "Ixion" (193/15), Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

BRADFORD, Yorkshire.—Old-established Retail for disposal; good position; well-fitted corner lock-up shop (or with house if preferred, now let off); returns £7 weekly, has done £15; very profitable; well stocked; patents almost nil; at valuation, about £180, or near offer; suit non-qualified. 221/29, Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

WEST OF ENGLAND (Watering-place).—Retail and Prescribing Business for immediate disposal; good opening for energetic man; well-fitted corner shop in busy thoroughfare; returns about £360, capable of considerable increase; rent £40; convenient house; lets readily if desired. "Barosma," (221/26), Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

TO Beginners.—Small good-class Business (West-end), principally Prescription trade; returns £400, easily increased under proper management; good house, rent £50, of which £27 is let off; established over 20 years; cause of sale, owner requires all his time for dental practice; price £200, part by instalments if desired. 221/6, Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

£1,700.—For immediate disposal, the Proprietor having other engagements, Chemist's and Druggist's Business, with Wines, Spirits, &c.; the above amount has been done by apprentices with very little help or attention from Proprietor; could be much improved and returns doubled by pushing man; the shop is double-fronted, in main thoroughfare of good market-town, wealthy neighbourhood, easy hours of business; lock-up shop, part let off, leaving rent under £10 per annum; exceptional profits are obtained, patent trade almost nil; price about £1,550; applicants must be prepared to pay cash. For further particulars, write to "Genuine," c/o Messrs. Baiss Bros., Jewry Street, London, E.C.

BUSINESSES WANTED.

3s. 6d. for 50 words or less; 6d. for every 10 words beyond.

WANTED, immediately, a good-class Light Retail and Dispensing Business, returning £800 to £1,000. Send full particulars, in confidence, to S., 6 Abingdon Buildings, Bath.

WANTED to purchase Business, preferably Light Retail and Dispensing, returning not less than £500; must be situated in the South of England, or within 100 miles of London. Send full particulars, W. M., 92 Wimpole Street, W.

WANTED, by young qualified man, to purchase a small Business, capable of being increased, with living-house attached; Midlands or South Coast. Full particulars to A. J. S. (221/11), Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

WANTED, immediately, a good and reliable Business, returning about £900 a year; or a Partnership in a larger business, if with view to ultimate succession; capital ready to invest, about £11,700. Send full particulars to S. S., c/o Bartle & Co., Chemists, Forest Hill, S.E.

WANTED to purchase a genuine Chemist's Retail, Dispensing, and Prescribing Business (or Partnership entertained in a good concern); cash will be paid; must bear every investigation. Send full particulars to 215/24, Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

TO LET.

3s. 6d. for 50 words or less; 6d. for every 10 words beyond.

DENTISTS.—Rare opportunity for practice; over old-established high-class Chemist's shop in Kensington; main thoroughfare; a Dental Business has been done and is now wanted; good house, six rooms, to let at low rent of £25 per annum, without premium; rates and taxes free. Apply, 10 Fulham Road, Brompton, S.W.

APPRENTICESHIPS.

RETAIL.

APPRENTICE.—Vacancy in a good-class country Dispensing, Analytical, and General business; premium if indoors. George R. Durraut, Hertford.

J. EDMUNDS, Dispensing Chemist and Surgeon Dentist, 33 High Street, Kingsland, N.E., has a vacancy for two gentlemanly youths, who have passed the preliminary examination or an equivalent preferred; fair amount of dispensing; good home; no Sunday duty; moderate premium; references to former pupils.

SITUATIONS OPEN.

3s. 6d. for 50 words or less; 6d. for every 10 words beyond.

RETAIL.

JUNIOR wanted, immediately; indoors; state salary required and experience. G. Barker, Hampton-on-Thames.

WANTED. Junior Assistant; send photo and reference; also state age and salary required; outdoors. T. Bell, Ambleside.

IMMEDIATELY. Junior Assistant; outdoors. Apply, stating age, height, salary, and references, J. Munday, 1 High Street, Cardiff.

WANTED. Junior or Improver for Light Retail, immediately. Apply personally, or if by letter with full particulars, to Clift & Co., Dorking.

JANUARY 4.—Outdoor; smart, reliable Assistant; good Counterman and Dispenser; not more than 26. "Chemist," 182 Clerkenwell Road, Holborn, E.C.

ASSISTANT, at once; Light Retail; Prescriber; good address; permanency; comfortable home; photo necessary. Worts, Chemist, Clacton-on-Sea.

WANTED, at once, Junior Assistant (outdoors) for Mixed Country business; short hours; no Sunday duty. Particulars to James Bordass, Driffield.

WANTED, at once, Assistant, good all-round; qualified or not; indoors. State age, salary, experience, and references, to Herbert Woodcock, Croydon.

AN Assistant, 23 to 25, able to speak Welsh, for a good-class General trade, wanted early in January. Apply, enclosing photo, to Morgan W. James, Chemist, Llanelly, S.W.

WANTED. Junior Assistant for Retail and Dispensing; good references; personal application preferred. J. Basdon-Smith, Ph.C., 51 Holloway Road, Highbury, N.

QUALIFIED Assistant wanted (outdoors), with good address, pleasant and obliging; married or single; must have good references. Apply, Haynes, 30 Southampton Row, W.C.

WANTED. Outdoor Assistant as Counterman, where four are kept. Apply, with photo, stating age, height, and experience, to E. J. Kitson, the City Drug Stores, Worcester.

JUNIOR or Improver; time for study; hours short; one half-day a week; abstainer preferred; in a Dispensing business; salary £24 (indoors). "Chemist," Malvern Wells.

ASSISTANT for Light Retail and Dispensing; indoors; hours 8 to 8, Saturday 10. Apply, stating usual particulars and salary required, to Weddell, 105 High Street, Colchester.

WANTED. Assistant, with good Dispensing and Counter experience; qualified preferred. State age, height, and salary (indoors), James Hewlett, Baily & Co, Chemists, Margate.

HASTINGS.—Gentlemanly Assistant; about 26; qualified and accustomed to good-class Dispensing business. Apply, with carte and usual particulars, Jameson & Curtis, Hastings.

MANAGER; London, S.W.; qualified; Extra or; good salesman of own preparations; steady; permanency. M. (2/29), Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

JUNIOR Assistant (indoors); must have been accustomed to good-class dispensing. Apply, stating age, experience, salary required, with photo, Rastrick & Son, King's Road, Southsea.

WANTED. at once, Junior, about 21; one accustomed to Photographic trade preferred. State full particulars, also salary required, to Rees Thomas & Son, Merthyr Tydfil, South Wales.

WANTED. competent Assistant for Retail Drug and Dispensing Department; rooms and attendance free. Apply, enclosing c.d.v., and state salary expected, Kiloh & Co. (Limited), Cork.

WANTED. an Assistant, about 23, of good address and a good counterman; indoors; Light Retail and Photographic. Apply, stating full particulars to F. Wheeler, Chemist, Guildford.

WANTED, an Assistant, accustomed to a good dispensing and mixed business. State experience, salary required (indoors), height, to J. C. Arnfield, Ph. Chemist, 7 and 9 Lower Hilgate, Stockport.

DRUG DEPARTMENT.—Qualified Chemist wanted; must be accustomed to Dispensing. State age, experience, and salary required. Address, Lewis's (Limited), Market Street, Manchester.

ASSISTANT (experienced, qualified) in high-class modern business; must be good Counter-hand. Send usual particulars (outdoors), W. Aston, Pharmaceutical Chemist, 21 Montague Street, Worthing.

A QUALIFIED Assistant wanted, in a first-class London Dispensing establishment, where several are kept. Write, stating age, height, experience, and salary required (indoors), to "Chemist," 26 Davies Street, W.

FOR South Africa.—Wanted, a smart, qualified Assistant; aged 25-30; passage paid out. Apply, giving full particulars as to experience to "Beta," 213/12, Office of THE CHEMIST AND DRUGGIST, 42 Cannon St., E.C.

WANTED, active, qualified Assistant (outdoors); state age, references, experience, when disengaged, &c.; hours 8.30 to 8, Saturdays 10.30; no Sunday duty. W. Proctor, 7 New Bridge Street, Newcastle-on-Tyne.

QUALIFIED Assistant, of good address, for first-class Dispensing business; good experience and references essential. Apply, with full particulars as to age, height, salary, &c., to T. Buxton & Co., Clifton, Bristol.

FIRST-CLASS opening in English Chemist's in Japan for qualified Assistant, about 25, with really good London experience; short hours; liberal salary. Full particulars to Dakin Brothers, 87A Leadenhall Street, E.C.

JESSE WILLIAMS & CO., Chemists, Park Hall Buildings, Cardiff, require, early in January, a competent Assistant; please give full particulars as to age, height, reference, salary required, and experience in first letter.

QUALIFIED Assistant wanted, about 23, for 7th January; indoors. Apply, with full particulars and photo, to Frost & Harrison, Pharmaceutical Chemists, Eltham Road, Blackheath, S.E. A vacancy also for an Apprentice.

JUNIOR Assistant, indoors, for Light Retail and Dispensing Business. Apply, stating age, height, references, salary required, if abstainer, and enclose photo (to be returned), J. F., 1 Avondale Terrace, Beaumont Road, Plymouth.

BRIGHTON.—A qualified Assistant; indoors. State age, height, salary, references, and when disengaged; send carte if convenient (which will be returned), K. Pears & Son, 16 Western Road, Brunswick Square, Brighton.

ABOUT the middle of January, a competent Assistant, accustomed to a high-class Retail and Dispensing business; must be well recommended. Particulars, with photo, to F. Rossiter, 9 Grand Parade, St. Leonards-on-Sea.

ASSISTANT (Minor), indoors, to Manage Branch; able to Extract preferred; good references necessary. State age, experience, salary, and full particulars, with photo if possible (to be returned), A. Worts, Chemist, Harwich, Essex.

WANTED, as early as possible, a registered or qualified Junior (indoors); used to a good general country business; comfortable home. State all the usual particulars with application, to Morris, Medical Hall, Teme Street, Tenbury.

NATHANIEL SMITH & CO., Cheltenham, require a qualified outdoors Assistant, who has had good experience in high-class business. Applicants will kindly give full particulars of their experience, &c., to 375 High Street, Cheltenham.

QUALIFIED Assistant, about 25 (indoors), of good address, with knowledge of Photography preferred; to take charge of a branch. Enclose photo and references to S. Stephenson, F.C.S., Pharmaceutical Chemist, Kensington, Liverpool.

ASSISTANT wanted; qualified; encouragement will be given for a permanency to a really good salesman and Window-dresser who will take an interest in the business; no others need apply. Address, "Proprietor," 15A Highbury Place, London, N.

QUALIFIED Assistant wanted at once, with view to succession; must have at least £400 to start with, and references that will bear thorough investigation. Apply, with full particulars as to age, salary, &c., to 12 Buckingham Mount, Headingley, Leeds.

WANTED, a qualified Assistant, who has had good experience in Dispensing; also a Junior; outdoors. Apply, stating length of time for which former situations have been held and usual particulars, to D. P. Roberts, Drug and Chemical Store, 120 North End, Croydon.

JOHANNESBURG, SOUTH AFRICA.—Wanted, Assistant with Minor qualification; 3 years' engagement; salary, £20 per month first year, £22 10s. second year, £25 third year; passage-money advanced if required. Address, "South Africa," c/o Street & Co., 30 Cornhill, E.C.

WANTED, immediately, Junior Assistant, with a good knowledge of Dispensing (indoors), for Agricultural business; hours 8 A.M. to 7 P.M.; no Sunday duty. State age, height, salary required, references, when disengaged, and enclose photo, Brigham, Chemist, Pocklington, Yorks.

PARSON C. BAKER, 174 Victoria Street, S.W., requires immediately after Christmas a qualified Assistant of good appearance and address; outdoors. State full particulars of experience, age, height, salary, &c.; enclose photo; good references indispensable; one desiring a permanency preferred.

SITUATIONS OPEN CONT'D

RETAIL—continued.

WANTED, a qualified Assistant for one evening a week, 6 to 10 P.M. Apply, Lloyd, 267 King's Road, Chelsea.

WANTED immediately, in good-class business, smart Junior Assistant; reasonable hours; close 4 o'clock Saturdays. Apply, personally, Jones Brothers & Co., 358 Holloway Road, N.

JUNIOR Assistant, for light Retail and Dispensing business; must be qualified. Apply personally, or if by letter, with usual particulars, to Mellin & Co., 88 High Street, Eltham, Kent.

PART-TIME Assistant required; Junior studying or Dispenser at hospital suitable; which part of day not material; personal application preferred. Hancock, 128 Fleet Street, E.C.

WANTED, Assistant about 23; must be a good Dispenser and accustomed to good Country trade. State full particulars and enclose photo (to be returned) to Hill, Chemist, Devises.

TAYLORS' DRUG CO. (LIMITED) are in want of a smart qualified Chemist. Apply, stating age, references and salary required, to the Secretary, 3, 5, and 7 Guildford Street, Leeds.

JUNIOR, for good-class Dispensing Business. Apply, with particulars of experience, age, height, salary required (indoors), enclosing carte (to be returned), W. W. Jones & Co., Kingsdown, Bristol.

WANTED, immediately, a steady and reliable Manager, for a light Retail and Dispensing business; must be qualified, single, and live indoors. Apply, Mrs. Purnell, 337 High Street, Cheltenham.

WANTED, immediately, an intelligent Junior Assistant or Improver; a good writer, and accustomed to bookkeeping preferred. State age, height, and salary, with photo, to J. Johns & Son, Southampton.

JUNIOR; indoors; must have good references; personal application preferred; if by letter, state age, salary required, references, when disengaged, and enclose carte (to be returned). Bunker, 135 Great Dover Street, S.E.

WANTED, qualified Assistant as Branch Manager, in Manchester district; one used to Store trade preferred; good wages given to good man. Apply, with usual particulars, to B. B., c/o Raines & Co., Wholesale Druggists, York.

A DISPENSER is wanted by a medical man in the provinces; this is an excellent opening for a young Minor student requiring time for study and facilities for working at the Minor subjects. Apply personally if possible at 180 Shaftesbury Avenue, W.O.

MANAGERS (2), for Country Branches, Yorkshire; must be energetic and of good appearance; salary £2 and commission; house and gas free; excellent opportunity. Apply, with copies of 2 or 3 testimonials, to J. W. Douglas, 9 Arundel Street, Strand.

MANAGER for small Branch; one used to quick Store trade, and can Extract Teeth preferred; outdoors; weekly half-holiday; no Sunday duty. Give full particulars and references to last two employers, and state if married or single. Cook, Chemist, Nottingham.

JUNIOR Assistant, of good address, about 20; indoors; for good class country business; must have good references. Apply, stating age, height, experience, salary required, when disengaged, and enclose photo (to be returned), to E. J. King, Pharmaceutical Chemist, Midsomer Norton, near Bath.

WANTED, at once, a good Assistant, aged from 25 to 35; references must bear strict investigation; a good Counterman, steady, honest, and industrious; salary 45s. per week (outdoors); only men in or near London need apply. 226/18, Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

COMPETENT qualified Assistant, to take management of Dispensing and Mineral-water business; must be over 27 years of age; preference for a man who has had counter experience in a first-class house; commencing salary £70, indoors, with rapid increase to a good man. 109 Kilburn High Road.

IMMEDIATELY, a Junior Assistant, aged about 20, for a Mixed County business, with small Wholesale; one just completed apprenticeship preferred. Apply, stating age, height, salary (indoors), reference, and photo, to Fred J. Oliver, Chemist, Maidstone. N.B.—Last week's applicants, please apply again.—F. J. O.

WANTED, immediately, for India, a qualified man, to manage a Drug department in a large Retail establishment, about 27 years of age; thoroughly competent, and of gentlemanly appearance; 5 years' agreement; salary to commence at 300 rupees per month, and increased annually by 25 rupees per month. Apply, giving full particulars, to Box 959, Sell's Advertising Offices, London.

WANTED at once, experienced Assistant, aged 22 to 25, steady and reliable, for a brisk Mixed business in the N.E. district; salary £40; indoors; one from a good country house not objected to. Apply, stating age, experience, references, &c., to "Statim" (220/13), Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

WANTED, the middle of January, an indoor qualified Assistant in a good Family and Agricultural trade; not over 40, and an Extractor preferred; hours 8 to 8; no Sunday duty. State age, experience, and salary (good references being indispensable), and enclose photo to Mr. Sandiland, Pharmaceutical Chemist, Bicester, Oxfordshire.

WANTED, in Manchester district, active Junior (outdoors), about 20, for pushing Retail business; must be quick and reliable, a good Counterman, and accustomed to the sale of Photographic requisites. Address, stating age, experience, references, and salary required, 58/32, Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

DISPENSER (Part-time) to a Medical Man in the S.E. District.—Wanted immediately, a young man of gentlemanly appearance and manners as Dispenser; from 9 to 12 and 6 to 9; no Sunday work; references required from last employer; £1 per week. Address, "Dispenser" (220/15), Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

CHEMIST having two business places, with houses attached, would like to meet with young Medical to reside in one; rent free; most flourishing town in North of England. Apply, "Junius," c/o Bleasdale (Limited), York.

WHOLESALE.

PILL-MAKING by machinery.—Wanted, a Lad used to the above. Apply, by letter, H. P. C. (1/60), Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

WANTED, Clerk in Wholesale Druggists' Office. Full particulars, including salary, age, experience, and references to 201/21, Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

WHOLESALE Drug trade. Packed goods department.—Wanted a young man to take charge. State experience, age, salary, &c., to "Packed Goods" (263/9), Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

LEDGER-CLERK wanted, with thorough knowledge of the Wholesale Drug and Patent Medicine trade. Apply, stating references and salary required, to 2/62, Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

REQUIRED, immediately, a Clerk with a thorough knowledge of Druggists' Sundries and Patents, and well up in prices. Apply, by letter, stating age, salary required, and experience, to 208/8, c/o Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

CLERK required for Invoices and Correspondence; one accustomed to similar duties and a qualified chemist preferred; unquestionable references indispensable. Apply, in first instance, by letter, stating full particulars and salary required, to Blackwell, Hayes & Spilsbury, Manufacturing Chemists, Moor Street, Birmingham.

SITUATIONS WANTED.

1s. for 12 words or less; 6d. for every 6 words beyond.

RETAIL.

ASSISTANT, Part-time. London; disengaged. D. J. Parry, Blaina.

MANAGER or Senior; aged 28; 5 ft. 10 in.; married. "Minor," 65 Oxford Street, Sheffield.

MANAGER or Senior; qualified, experienced; 39; married. "Alpha," 12 Hartley Street, Nelson.

ASSISTANT: 10 years' experience; good references; Extractor. A., 13 London Road, Dover.

LADY Dispenser; Bookkeeper; qualified; highest testimonials. Miss Coste, 24 Hugh Street, Fimlico.

MANAGER or Locum; qualified; aged 40; disengaged. "Chemicus," 112 Foxberry Road, Brockley, S.E.

MANAGER, Dispenser, or Locum; disengaged; qualified. "Chemist," Rye Road, Hoddesdon.

SITUATIONS WANTED CONT'D**RETAIL—continued.**

ASSISTANT; 25; qualified; disengaged; references and testimonials. "Alpha," Glasgow Road, Muirkirk.

LOCUM or Part-time engagement; terms moderate. "Chemist," 41 Prince's Square, Kennington Park.

DISPENSER; qualified; to Doctor or Institution preferred. H. Davies, 24 Compton Terrace, Islington.

ASSISTANT; tall; 24; high-class experience; good references. Miller, 117 Princes Street, Edinburgh.

DISPENSER or Assistant; references; disengaged; permanency. R., c/o Berry, London Road, Basingstoke.

DISPENSER in good-class business, or to firm of Surgeons; good references. Morris, Emlyn House, Carnarvon.

AS Assistant; varied experience; good Prescriber, Extractor, &c. J. T. B., 24 Stanley Street, Easton, Bristol.

MANAGER; Branch or otherwise; qualified; 28; good references. H. C., 342 High Road, Brondesbury, N.W.

ASSISTANT; temporary or permanent; outdoors; aged 29. "Extractor," 2 Horton Street, Lewisham.

JUNIOR; aged 21; 5 years' experience; passed Prelim. Exam. F. W. Spinks, Tramore, Waterford, Ireland.

ASSISTANT or Manager; qualified experienced, disengaged. N. G., 58 Richmond Street, Moss Side, Manchester.

JUNIOR; 20; 3½ years' good-class experience; disengaged January 14. Beynon, 55 Commercial Road, Newport, Mon.

AS Senior or Manager; 27; qualified; London and provincial experience. "Dental," 55 Susans Road, Eastbourne.

QUALIFIED; 24; disengaged; good experience; Eastern Counties preferred. G. N. Edwards, Elmham, Norfolk.

JUNIOR; 23; 6 years' experience; excellent references; Nottingham or Manchester. H. Abraham, Wainfleet, Lincs.

AS Manager, temporary or permanent; aged 43; qualified; disengaged. C. M., 1 Stratford Villas, Camden Square, N.W.

OCCASIONAL Evening employment wanted by Major Student; London. Jones, 5 William Street, Aberystwyth.

QUALIFIED; 32; disengaged; Manchester or Liverpool preferred. "Minor," 3 Highfield Road, Seedley, Manchester.

JUNIOR; 21; disengaged; good references; abstainer; photography. Horace Flemings, Brockhall Parade, Northampton.

AS Improver, in January; Yorkshire preferred; aged 19; 4 years' experience. H. Clarke, West Marton, Skipton, Yorks.

COMPETENT Assistant; aged 26; married; excellent references; London preferred. Bedding, 289 Tabard Street, S.E.

MANAGER. Senior, or Dispenser; aged 35; qualified; married; Dentistry. "Chemist," 7 Commercial Street Shipley.

AS Dispenser; Hall qualification; 5 years' experience; highest references; aged 22. Steer, Mill Street, Kingsbridge, Devon.

AS Manager or otherwise; aged 23; qualified; all-round experience. Apply, "Extractor," 16 Courtneil Street, Bayswater, W.

QUALIFIED Manager or Senior; north; disengaged; excellent references. 57 Westmorland Road, Newcastle-on-Tyne.

IMMEDIATELY, London, in good-class Dispensing business; aged 22; S.W. preferred. X., 166 North End Road, W. Kensington.

EXPERIENCED Assistant; 33; good-class Country preferred; abstainer; height 6 ft. "Ourare," Arhosfa, Menai Bridge.

DISPENSER; passed Minor and Apothecaries Hall; good experience; 24; disengaged. "Medalist," 6 Middle Row, Faversham.

EVENING engagement after 6.30; Chemist or Surgeon. "Tomson," 154 Akerman Road, S.W.

QUALIFIED Assistant; disengaged beginning of February; aged 23½. G. N., 66 Goldhawk Road, W.

MANAGER or Senior; 26; qualified; outdoor; first class London experience. A. J. S., 27 Craven Terrace, Lancaster Gate, W.

JUNIOR; 20; 5 years' experience; good reference; tall; abstainer. Venables, Walton's Green Farm, Navestock, nr. Brentwood, Essex.

AS Junior; outdoors; height 5 ft. 11 in.; aged 24; varied experience and excellent references. Northwood, Kirk Hallam, near Ilkeston.

MANAGER; capable; energetic; experienced; qualified. "Tall," 222 22, Office of THE CHEMIST AND DRUGGIST, 42 Cannon St., E.C.

JUNIOR or Improver, aged 20, height 5 ft. 9 in., desires engagement in Dispensing business. J. E. Whitaker, 146 Dirckhill Road, Bradford, Yorks.

JUNIOR; unqualified; Dispensing; time for study; outdoors preferred; good experience and references. "Rhubarb," 162 Kennington Park Road.

ASSISTANT, 23, qualified, with West-end experience, requires outdoor situation; City preferred. Clayton, 9 St. Mary's Road, Walthamstow.

ASSISTANT or Manager; qualified; 14 years' experience; permanency, or with view to partnership or purchase. W. R. Eyre, Risley, Derby.

MANAGER or Locum; qualified; quick retail and dispensing experience; good references; disengaged. Hunt, 146 Southampton Street, Reading.

MINOR Student; to win; Apothecaries' Hall certificate; Dispensing and counter; 16 years' experience. "Minor," 15 Badsworth Road, Camberwell, S.E.

QUALIFIED Assistant, Dispenser, Prescriber; excellent references; varied London experience; 28. 221/27, Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

JUNIOR; 20; 4½ years' experience; 5 ft. 7 in.; steady, willing, abstainer; good reference. X. (226/20), Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

MANAGER, 39, single, in Retail, Dispensing or Prescribing business; active; good references; town or country. Address, "Minor," 78 Wells Street, Oxford Street, London, W.

EXPERIENCED Assistant; outdoors; well up in Dispensing, Prescribing, and Extracting; aged 40; height 5 ft. 10 in.; satisfactory references. Lloyd, 53 Nunnery Lane, York.

MANAGERSHIP; permanency or locum; qualified; highest references; town and country experience; careful Extractor, Dispenser, and Prescriber. "Chemist," 1 Parks, Minehead.

YOUNG Qualified French Pharmacist of the first class, desires situation in London Pharmacy; best references. 197/29, Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

MANAGER; qualified; Branch or otherwise; registered Lentist; good Prescriber and Extractor; abstainer; 26 years' experience; disengaged. "Spec," 4 Harbour Street, Folkestone.

QUALIFIED and thoroughly experienced man seeks re-engagement; aged 40; unmarried; good Dispenser; permanency preferred; salary moderate; disengaged. "Masonic," 7 Pepler Road, Kent Road, S.E.

AS Manager; 27; up-to-date; brisk trade and short hours preferred; London or large provincial town; permanency; 11 years' Retail experience; disengaged February 1. C. H. G., 48 Bourne-mouth Road, Folkestone.

MANCHESTER.—Junior, 23, 6½ years' experience, desires situation with time for classes; Dispenser, Prescriber, Extractor; excellent references; disengaged. W. Greenwood, Heathfield Road Pharmacy, Handsworth, Birmingham.

QUALIFIED Chemist and Son open to accept Management of Business, town or country, early in 1897; more than 5 years' reference to present employer. R. and R. (191/35), Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

MANAGERSHIP, London or provincial, desired by Registered Chemist and Dentist; married; reliable, experienced; long hours declined. State salary and particulars. "Dentist" (221/4), Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

RETAIL—continued.

JUNIOR: aged 20; height 5 ft. 10½ in.; abstainer; 5 years' experience. Verrier, St. George, Bristol.

SENIOR or Manager; qualified; South preferred; married. "Den'tist," 7 Commercial Street, Shipley, Yorks.

BIRMINGHAM; qualified; with time for lectures. "Dental," 23 Chaddlewood Avenue E., Plymouth.

JUNIOR: 20; medium height; 5 years' experience; good references. Evans, 31 Parliament Street, Gloucester.

IMPROVER: disengaged; 21; tall; 3½ years' experience. Davies, 23 Gordon Road, Handsworth, Birmingham.

MANAGER or Senior; highest experience and references; married. "Perfume," 39 Victoria Road, Peckham.

DISPENSER or Branch Manager; quick and accurate; qualified. Tilley, 4 Buckingham Street, Portland Road, W.

ASSISTANT: 25; qualified; 8½ years' experience; height 5 ft. 7 in. Comrie, c/o Jameson, 1 Harold Place, Hastings.

QUALIFIED Manager; 28; unmarried; experienced; undeniable references. "Alex," Moulton, Main Street, Bingley.

ASSISTANT: best London Store experience; smart counterman and Dispenser. Williams, 1 Louvain Road, Clapham Junction.

QUALIFIED: aged 23; 6 years' experience. "Benzoin" (227/17), Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

JUNIOR: tall; in or near London preferred. "Ipecac." (228/3), Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

ASSISTANT: 24; good experience and references; outdoors. "Emol." (227/8), Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

MANAGER, Locum, or Dispenser (Chemist, Surgeon, or Institution); first-class experience and references; qualified. Shrimpton, 6 Grove Street, Oxford.

AS Assistant or Manager; qualified; 26; good London experience and references; disengaged; outdoors. "Chemist," 31 Doughty Street, Russell Square, W.C.

DISENGAGED, competent, experienced man; 39; single; business tact and push for working provincial Branch; abstainer; unqualified. "Manager," 19 Chapel Street, Uxbridge.

WHOLESALE.

PACKER, or Wet counter; 25; excellent references. "Stockwell," 16 Salisbury Street, Marylebone.

PHARMACIST requires appointment as Chemist to a manufacturing firm. Johnson, 4 Celia Road, Tufnell Park.

STOCKKEEPER, Packer; 2 years' Retail experience; highest references. Crane, c/o Boots, Broad Row, Great Yarmouth.

AS Representative; 9 years' first-class Retail experience; excellent references. Pearson, 283 Elgin Avenue, Maida Vale, W.

JUNIOR (20) requires situation, Wholesale or Manufacturing, by February 20th; Retail experience only. S. D., 12 Lansdowne Road, Croydon.

AS Warehouseman or Manager of Aërated-waters department; 10 years' experience; good references; disengaged in January. A. Mattingly, c/o Wood, Chemist, Windsor.

ADVERTISER, with good experience in Surgeon's trade, desires engagement; 6 years' reference. 2/2/12, Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

YOUNG man, 21, having had good experience in a large Wholesale and Retail Chemist's, desires responsible position in Warehouse; first-class references. R., 34 New Road, Stepney, E.

TRAVELLER, with good connection in Midlands and South Wales, in Sundries, Bottles, open for engagement with good house. 208/21, Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

TRAVELLER, wanted, to represent a first-class Wholesale Drug or Sundries house; 20 years' wholesale, Retail, and Medical experience; very active and energetic, with good appearance; first-class salesman; aged 36; highest references. J. H., 47 Oldfield Road, Salford, Manchester.

MISCELLANEOUS.

Special charges are made for Advertisements under this heading, which can be obtained on application.

DAISY.—For particulars of an unique display to draw crowds to the window, write to "Daisy," Leeds. Messrs. Hickman, Chymists, Bridgewater, wrote: "The model is fetching the people, and just the thing to make Daisy HUM."

ASSISTANTS rapidly prepared personally and through the post for all examinations; most successful system; numerous high passes at Major, Minor, and Apothecaries' Hall; competent tutors in all departments. Apply, Mr. G. E. Skerry, M.A., the City School of Chemistry and Pharmacy, 27 Chancery Lane, London.

ENGLISH Agency wanted for Patent Medicines or other articles by Agent of extensive scientific and commercial experience in all branches of the trade; able to command business, having every facility for warehousing, distributing, and placing on English or Continental markets foreign or other specialties; Provincial firm requiring London offices would be entertained. 227/24, Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

PHARMACEUTICAL Chemist, residing in an important port of the West Indies, and having an intimate knowledge of the Wholesale Drug trade, is open to act as Agent for an English or Foreign house dealing in Drugs, Chemicals, Sundries, Essences, &c., or as representative for an established Pharmaceutical Specialty; all replies will be regarded as strictly confidential. Address, in the first instance, "Jamaica" (221/38), Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

CHEMISTS' Shop-fixture.—Ranges mahogany drawers, with bevelled-edge glass labels and cut-glass knobs, shelving above, lockers below; mahogany dispensing-screens; counters with glass-case fronts; wall-cases; bent front and flat top counter-cases; counter-desks; tooth-brush cases; complete shop-rounds, &c.; every requisite for chemists, new and second-hand; extensive stock to select from, at extremely low prices; practical men sent to all parts; estimates free. Matthews, Chemists' Fitter, 14 Manchester Street, Liverpool.

To be Sold, at once, excellent Chemist range of fixtures, comprising solid mahogany-fronted drawers, bevelled-edge labels, crystal-cut knobs, also shelving and lockers complete, 12 ft. long, price £8 10s.; 6 ft. mahogany bent-glass counter-case, with sliding-trays, mirror back, and show-shelf above, price 70s.; massive mahogany dispensing-screen, with sponge-case under, bevelled mirror in centre, latest design, £12; also large stock of wall-cases, desks, window-enclosures, &c., equal to new; shops fitted in all parts of the country. Edwards & Co., Medical Fitters, White-chapel, Liverpool.

CHEMIST'S 12-ft. range 60 mahogany-fronted drawers, bevelled-glass labels, glass knobs, pilasters, shelves, mahogany cornice above, lockers below, complete high-class fitting, £13; 6-ft. mahogany bent plate-glass counter-case, display-shelves, mirror backs, trays, &c., 97s. 6d.; 5-ft. similar, 80s.; handsome 6-ft. mahogany glass wall-case, £8 10s.; new and second-hand wall-cases, dispensing-screens, enclosures, counters, glass shelves, shop-rounds, jars, &c. Chemists fitted complete. Mills, Shopfitter, Showcase Manufacturer, 203 City Road, London, E.C.; Steam Works, 82 Bath Street, E.C.

TO CHEMISTS AND DRUGGISTS.—The Koko Maricopas Company (Limited), 11 Gray's Inn Road, London, will supply a Flag and Pole (free) to be fixed over the shop, with the words in white letters, "Koko for the Hair," and with the name, &c., of Chemist underneath; this is found to be a splendid advertisement for Chemists and Druggists; a beautiful picture of Miss Ellen Terry (framed, 22 in. by 16 in.) can be had on application either to Messrs. Butler & Crispe, 82 Clerkenwell Road, London, or to the Company at above address; write for particulars.

SHOP FITTINGS.—A complete set ready for immediate delivery and use; all modern, and in excellent condition, comprising complete wall fixture, 14 ft. long, with drug drawers, mahogany fronts, bevelled labels and cut crystal knobs, bottle lockers, shelving, pilasters, and mirror poison-cupboard and cornice; handsome glass wall show-case, 10 ft. long, fitted with adjustable shelving and massive carved mahogany uprights; mahogany and plate-glass serving-counter, 12 ft. long, with sliding shelves, and fitted behind with label, paper, till-bowl and other drawers; attractive dispensing screen with bevelled mirror-centre and perfume cases, and plate-glass and mahogany counter, and marble-top sponge-case under; mahogany counter-desk and plate-glass show-case combined; and stamped scales and weights; price £70 the lot, or will divide. Philip Josephs, 54 Old Street, City Road, London, E.C.

PRELIMINARY AND MINOR.

STUDENTS! Write to-day for a "Guide to Examination," gratis and post free, giving the best advice how to prepare. Knotty Points in Latin Grammar, 1s. 6d.; Caesar Simplified, 1s.; Metro System Simplified, 1s.; How to Write an Essay, 3d.; Equations Simplified, 1s.; Notes on Dispensing, 1s., post free. Mr. J. Tully (Hills Prizeman), Chemist, Hastings.

Exchange Column—Bargains

TERMS.

Advertisements in this department must be paid for in advance. From this rule no deviation can be made. Insertions are charged at the rate of $\frac{1}{2}d.$ per word, provided the advertiser attaches his name and address, for each word of which he must also pay at the same rate. A price is counted as one word—as, e.g., £1 10s. 0d.—and the minimum charge is 6d. If he pays 1d. per word, his name and address will be registered and figures attached to his advertisement—thus: 24/250. All correspondence referring to such advertisements must be addressed to “The Publisher of THE CHEMIST AND DRUGGIST, 42 Cannon Street, London, E.C.” and the figures must be distinctly endorsed upon the envelope. Letters will then be forwarded to their proper destination.

DEPOSIT OF MONEY.—In order to ensure safety we offer the following system:—The purchaser of anything advertised in the Exchange Column may remit the amount to us. We acknowledge receipt to both parties at once, and only pay the money deposited on the advice of the remitter. Whether returned to him or paid to the seller, we charge a commission of 6d. on any transaction of £3 or less, or 1s. if above that amount.

APPARATUS.

Student's microscope and sundries, cost 60s., sell 35s.; also slide-cabinet, holds 150, 5s. SYMES, 14 Hardman Street, Liverpool.

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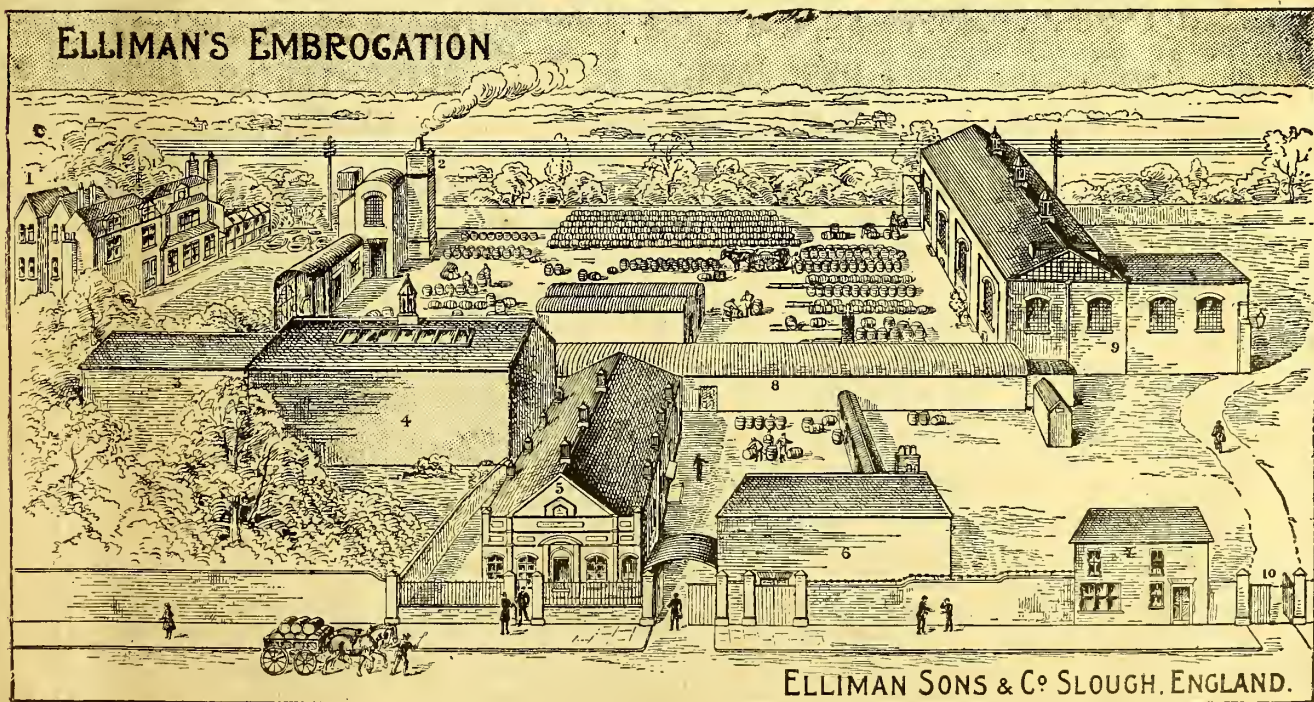
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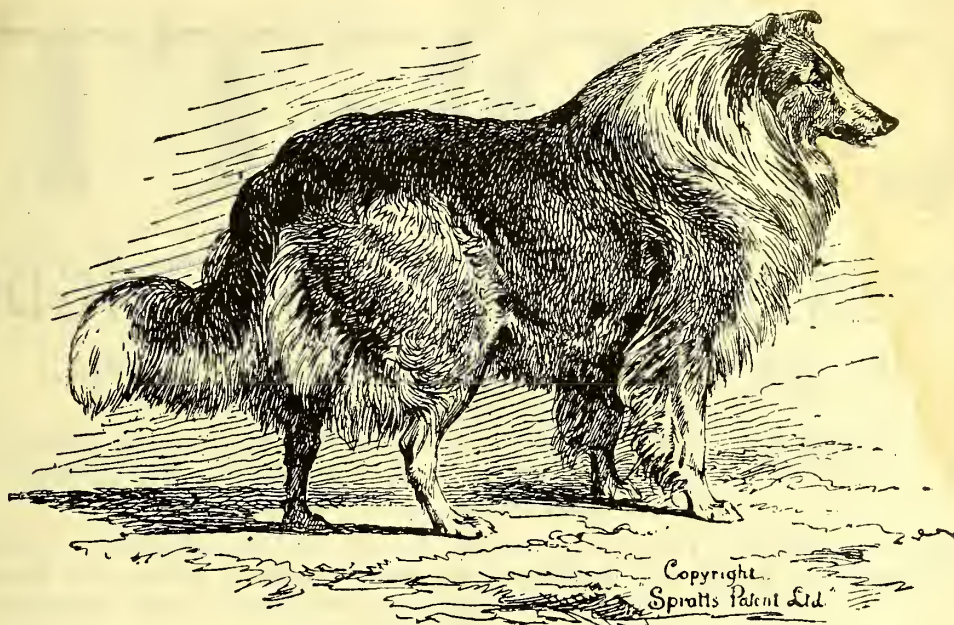
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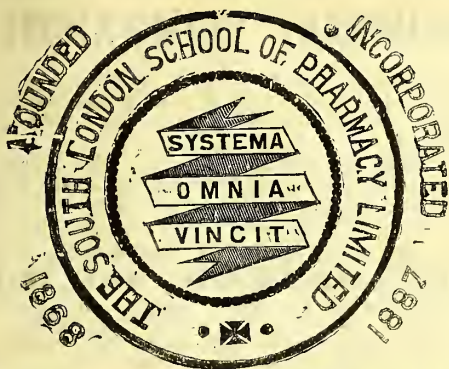
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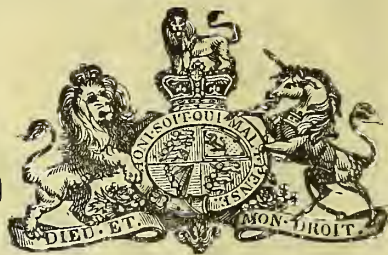
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IDRIS ROYAL TABLE WATERS ARE SUPPLIED
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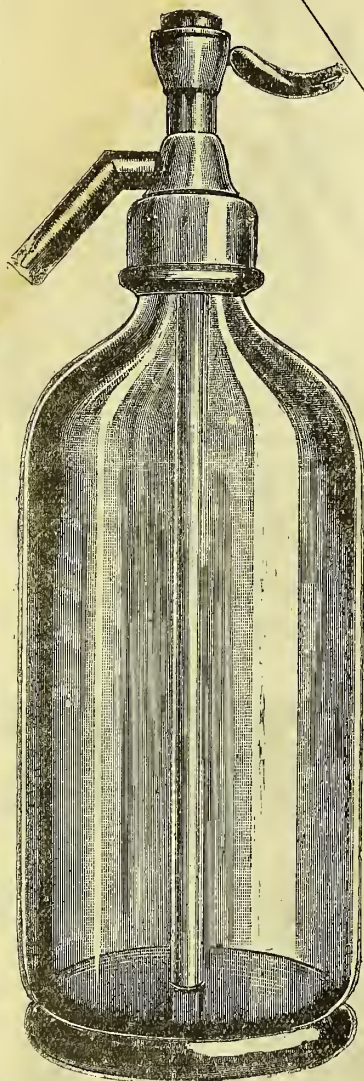


EIGHT GOLD MEDALS AT RECENT EXHIBITIONS.

ROYAL

All Chemists who wish to do a large trade in Mineral Waters are advised to stock these well-known Waters, which are in constant demand by the Public, and sell better than any others.

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Medical Men strongly recommend Idris Table Waters. Chemists who have sold these Waters for many years still find their business increasing.

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C.A.M.W.A.L.

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NEW YEAR.

These Syrups being most suitable for mixing with AERATED WATERS will

FIND A READY SALE

DURING THE

NEW YEAR'S FESTIVITIES,

As they are suitable alike for the refreshment of Adults and for
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They will also promote the sale of AERATED WATERS.

Elegantly put up in Brandy and Champagne Bottles, at the following Prices—

Brandy Bottles, large, 26-oz., 9/- per dozen, bottles included	} 1/- per dozen allowed for empty bottles.
Champagne do., small, 13-oz., 6/- " " " "	

A SAMPLE ORDER SOLICITED.

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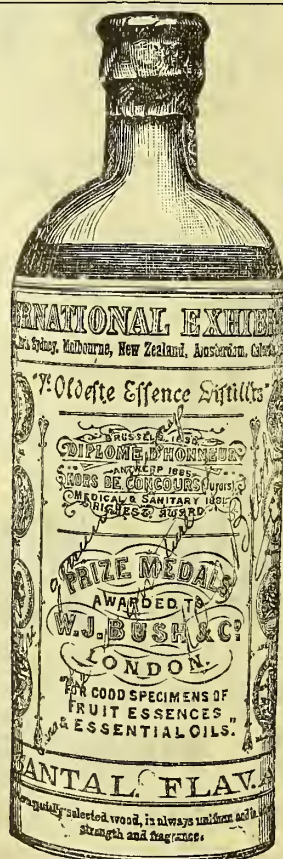
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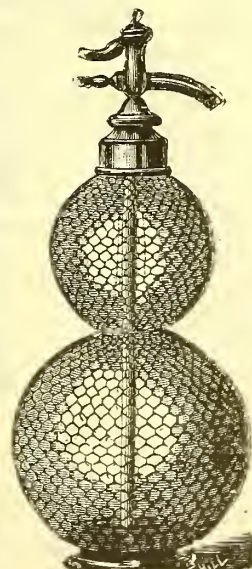
1	2	3	4	5	8 pint.
6/-	6/8	7/6	8/6	10/5	16/- each.

Including two funnels and stopper for charging.

The tops of these Seltzogenes are made of pure black tin, guaranteed.

All our Seltzogenes are
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ESTABLISHED 1855.

When diluted in the proportion of one part to forty parts of water at 60° temperature, they faithfully represent the Medicated Waters of the British Pharmacopœia. They are always of uniform strength, and will keep good any length of time in any climate.

Aqua Amygd. Amar. Cono. (U.S.) ..	4/- per lb.	Aqua Cassia Cono. ..	4/- per lb.	Aqua Menth. Virid. Cono. ..	4/- per lb.
" Anethi, Concent. ..	4/- "	" Flor. Aurant... ..	3/6 "	" Pimentæ ..	4/- "
" Anisi ..	4/- "	" Sambuci Cono... ..	3/6 "	" Pulegii ..	4/- "
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Each Bottle has the Inventor's Protection Label over the cork, without which none are genuine.

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Samples of any of the above sent free on application from

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**NATURAL
SPARKLING
TABLE
WATER.**

SELLS READILY
AND LEAVES
A GOOD PROFIT.

Quarts, Pints, and Splits. For Prices and Terms, apply to ROSBACH SPRINGS, LIM., 19 Regent St., W.



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A COMPLETE APPARATUS,
CAPABLE OF PRODUCING
OVER

300 DOZ. BOTTLES

of Aerated Water per day,
at a minimum of cost,
from

£20.

SODA-WATER MACHINERY
AND ALL APPLIANCES FOR THE TRADE.
BOTTLES, SYPHONS,
NO DANGER. NO MESS.

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ILLUSTRATED
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Known, after 25 years' test in the United Kingdom, as the most popular, safest, and best Natural Aperient Water, is now being supplied through the Distributing Wholesale Houses all over Great Britain and Ireland, at prices fixed by the Proprietor, Mr. Andreas Saxlehner, of Budapest, Hungary, which are as follows:—

Per Case of 25 large bottles,	22/6	Per dozen,	12/-
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„ „ 25 large „	21/-	} Per 10-case lots.		
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For net cash.

London Agency—TRAFALGAR BUILDINGS, CHARING CROSS, W.C.

SALLYCO!

(REGISTERED)

The Mineral Water of the Day.

A Pleasant Beverage, superior to all other English and German Mineral Waters. It mollifies and qualifies all spirits; mixes well with wines. Relieves Alcoholic Thirst without depressing the system.

It is a Urate Solvent, and prevents fermentation of food.

One bottle taken every morning on an empty stomach stimulates the Liver, Kidneys, and Skin to healthy action.

Recommended by Medical Men for Sluggish Liver, Gout, Rheumatism, Kidney Complaints, Lumbago, and Sickness.

All who have tried it are delighted with SALLYCO as a Beverage and Remedy.

Retail Price, 5/- doz. on rail.


Wholesale, 36/- per gross, Carriage Paid.

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WANTED, Aerated Water Manufacturers all over the world (everywhere 100 miles from London) to bottle SALLYCO on special and advantageous terms.

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SALE OR RETURN




33 1/3% DISCOUNT


NO RISK.

CHEMISTS with Wine Licences are invited to take the Sole Agency for their town of "**HOLLOWAY'S COCA WINE.**" The proprietors will bill the towns, sample doctors, advertise you in local papers, creating a good advertisement. Particulars from E. A. Holloway, A.P.S., Torquay.

2/9 and 1/6 retail.



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TOWER TEA.

The Best and the Cheapest in the World at the Price.

In $\frac{1}{4}$, $\frac{1}{2}$, and 1-lb. Packets only, to Retail at 1/-, 1/2, 1/4, 1/6, 1/7, 1/8, 1/10, 2/-, 2/4, 2/8 per lb. Also in Handsome 1-lb., 3-lb., and 5-lb. Decorated Tins, to Retail at 1/10, 2/-, and 2/4 per lb.

Agents appointed by

TOWER TEA, LIMITED, 5 JEWRY STREET, LONDON, E.C.

Only ONE in each Town.

WINE LICENCES.—We pay the licence for our agents; we give 33 $\frac{1}{3}$ discount, sample doctors, bill towns, give sole agency and newspaper advertisement: one agent sold 48 doz. in eleven months: send for circular: secure agency White's Gold Medal Coca Wine. S. B. White, A.Ph.S., Leicester.

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MILK STERILIZERS.

Nos. 1, 2, and 3.

**HAWKSLEY'S
PATENT.**

Descriptive Pamphlets Free by Post.

DAILY INCREASING SALE.

See Diary, page 574.

May be had through the Wholesale Trade, or direct from

Patentee, 357 OXFORD STREET, LONDON, W.

"SOLAZZI" LIQUORICE JUICE

THE CHEMISTS' BRAND.

THE TESTIMONY OF "THE LANCET."

The following is from "THE LANCET" of March 30, 1895.

"The above brand has long been known to be of standard purity. We found the specimen to be completely soluble in water and entirely free from impurities of any kind. It is, therefore, well adapted for the pharmaceutical purpose for which it is so useful, while as a popular demulcent it is both safe and reliable."

Recommended also by "The British Medical Journal," "Health," "The Chemist and Druggist," "Food and Sanitation."

ASK FOR SHOWCARDS AND HANDBILLS.

NEW PATENT

AIR-TIGHT CHEMIST JAR.

A slight turn of the knob presses the indiarubber Band against the glass, and renders the vessel absolutely air-tight. The Stopper is made of pure Nickel, of handsome shape.

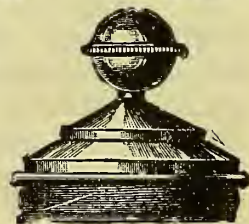
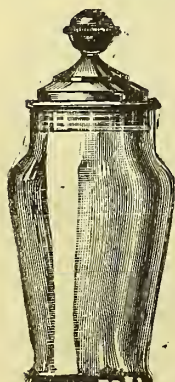
INVALUABLE FOR SHOW BOTTLES, CHEMISTS, CONFECTIONERS, ETC.

Samples and Prices of all Chemists' Sundriesmen.

C. MELIN,

37 CRUTCHED FRIARS, MARK LANE, E.C.

[2]



Section of the Nickel Stopper when closed.

PEPTARNIS

THE IDEAL INVALID FOOD.

People who can digest nothing else can digest PEPTARNIS. It is the most nourishing and digestible meat preparation before the public.

[1]

Prices Protected from Cutting.



Monopoly between the Chemist & Patentee.

SOLD IN 1-LB. TINS AT 4/-
 " 2-LB. " " 2/1
 " 4-LB. " " 1/2

It will certainly pay you to stock this preparation, as it will be well advertised to the public, and not retailed by anyone but Dispensing Chemists and Druggists.

GROCCERS AND STORES WILL NOT BE SUPPLIED—THEREFORE NO CUTTING.

The Cocoa itself is of exceptional quality, with all the necessary fat abstracted; and to this is added, by special process, the finest quality of Pancreatin and Bicarbonate of Soda. After some years' experience, with the assistance of eminent Doctors and Pharmaceutical Chemists, it is made in that way, so that the consumer tastes only the Cocoa;

And, as a recompense for their united work, it is the Patentee's decision not to bring it into the hands of the Grocer.

Terms and further particulars can be obtained of the following Wholesale Houses:—Messrs. BARCLAY, EDWARDS, HOVENDEN, LYNCH, SANGER, and SUTTON, London; GOODALL, BACKHOUSE & CO., Leeds; WOOLLEY, SONS & CO., Manchester; EVANS, GADD & CO., Exeter.

Van Houten's

PURE SOLUBLE

"A Perfect Beverage, combining
Strength, Purity and Solubility."

Medical Annual.

Cocoa.

"PURE and unmixed" . . . "really cheaper to use."

The Lancet.

Telephone No. 5284.

Telegrams—"TRUXILLO LONDON."

Another Letter from the Trade.



Family Chemist, Albert Street,

Hebden Bridge, 6th October, 1896.

Gentlemen,—I have now sold your Coca Wine for some time, getting my supplies from the Wholesale. I enclose the signed agreement.

Shall be glad of any advertising matter, especially if mentioning me as Agent.

Have every confidence in your Coca Wine, and am quite satisfied with the profit and the fact that I am supplying a good article, or would have put one up myself before now. I find people come back a second, and even a third, time for yours, which cannot be said of all the Coca Wines I have stocked. I have three Brands in now of which I don't think I have ever sold a second bottle to the same customer, and such a state of things makes me mad.

With all best wishes, yours faithfully,

G. B. WRIGHT.

The Proprietors of "HALL'S COCA WINE" supply Showcards, Printed Matter, &c., upon application.

STEPHEN SMITH & CO., BOW, LONDON.



THE WHOLESALE PRICE.

RETAIL PRICE.			PER DOZEN.
6d. Packets (Two Dozen in a box)	...	...	5/-
9d. Tins (Two Dozen in a box)	...	...	7/6
1/6 Tins (One Dozen in a box)	...	...	15/-

DISCOUNTS.

5 per cent. Discount on Orders up to £5.

7½ per cent. Discount on Orders for £5 and upwards.

Terms—Cash within 7 days.

Carriage Paid on Orders value £2 and upwards.

N.B.—The above Discounts are from 3¾ to 6¼ per cent. better than can be obtained from any other source, whilst the merits of DR. TIBBLES' VI-COCOA are far greater than any other similar preparation in the world.

LIMIT OF CUTTING.

The Proprietors hereby give notice to the Trade that the limit of "cutting" prices of DR. TIBBLES' VI-COCOA has been fixed as under:—

6d. Packets to be sold at not less than 5½d.

9d. Tins ,, ,, not less ,, 8½d.

1/6 Tins ,, ,, not less ,, 1/4½

Full Prices to be obtained wherever possible.

FURTHERMORE,

Any Chemist, Grocer, or Stores cutting below these prices will be refused supplies direct from ourselves. And in this connection it is important to note that in £5 lots and upwards no trader in the kingdom, "Wholesale or Retail," can obtain more than the 7½ per cent. discount we offer.

Read the foregoing, send your order to

DR. TIBBLES' VI-Cocoa Ltd.,

SUFFOLK HOUSE, CANNON ST., LONDON, E.C.

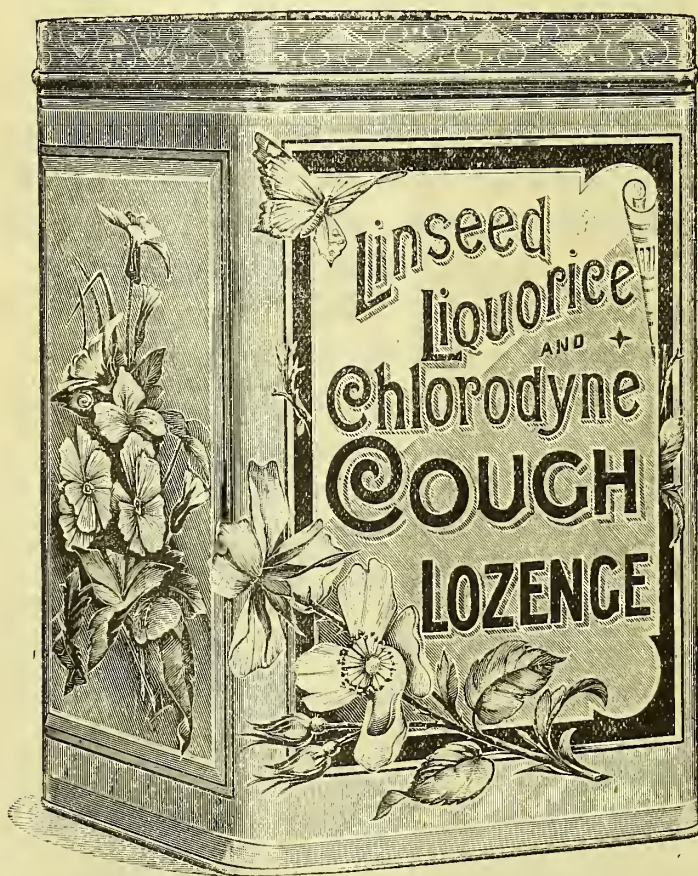
And obtain your fair share of the profits that are daily being made by our customers everywhere.

ROBERT GIBSON & SONS,

MANCHESTER, AND

1 GLASSHOUSE YARD, LONDON,

Beg respectfully to call the attention of buyers to their new enamelled and beautifully decorated Tins for Linseed, Liquorice, and Chlorodyne Lozenges.

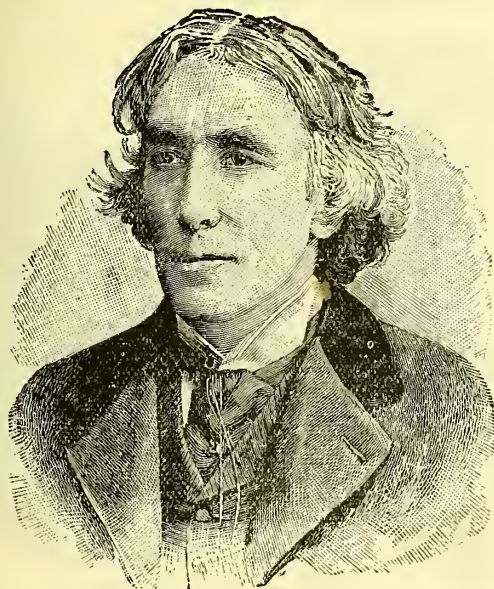


Each Tin holds 7 lbs., and is given with the Lozenges, besides affording security for them keeping in any climate. The Tins provide a handsome Show Case for the Counter, and will, no doubt, lead to an increasing demand. Every Wholesale House in or out of London can supply, or indents may be sent direct to Manchester.

PRICE LIST ON APPLICATION.

MARIANI WINE

*Testimonials from over 2,000 Physicians, and from the
Greatest Celebrities of the Century.*



*"I can certainly add my testimony to the virtues
of Mariani Wine, which I have found excellent,
and am well convinced of its quality."*

HENRY IRVING.



*"The admirable Mariani Wine, which has so
often rescued me from exhaustion."*

CHARLES GOUNOD.

Retail price 4/- per bottle, or 45/- per dozen.

BEST WHOLESALE TERMS.

Per original six-dozen case, **£10 4s.** net cash, with 3 per cent. discount
off six-case lots.

Smaller quantities can be obtained of all the Patent-medicine Warehousemen.

EXPORT ORDERS OF ORIGINAL CASES SHIPPED IN BOND.

SOLE CONSIGNEES FOR GREAT BRITAIN AND COLONIES—

**WILCOX & CO., 83 Mortimer St., W. } LONDON.
GABRIEL JOZEAU, 49 Haymarket }**

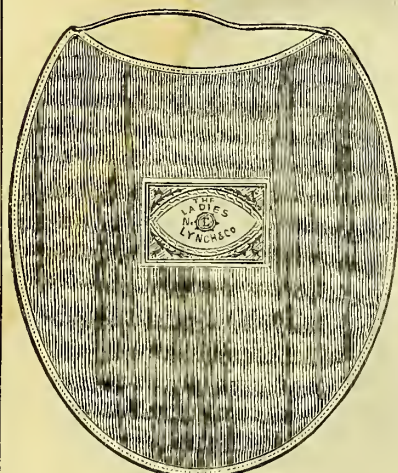
P.S.—Write for Catalogue, which is the only complete list of French Medicines in the United Kingdom.



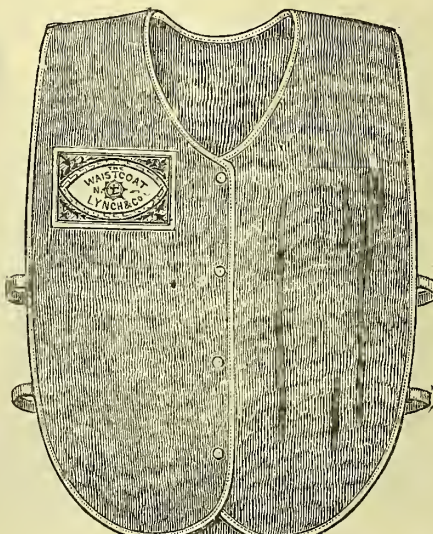
CHEST PROTECTORS.



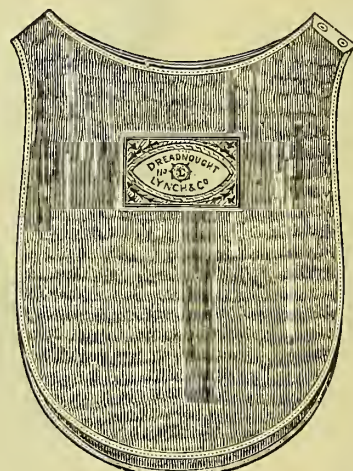
We make two qualities of Felt Chest Protectors, Best and Second, in two colours, Scarlet and White. The Best are made of the finest English felt, manufactured specially for us, and cannot be surpassed. The Second are of quality usually sold as best, and nicely finished in every way. Both qualities are boxed and labelled.



No. 325.



No. 326C.



No. 326.

PRICES AS UNDER, viz.:

			1	2	3	4	5	6
No. 325.	Best quality	per doz.	5/8	7/6	10/-	13/-	17/-	21/6
No. 325/2	Second quality	"	5/3	7/-	9/6	12/-	15/6	20/-
No. 326.	Best quality	"	13/6	17/6	22/-	28/-	35/-	45/6
No. 326/2.	Second quality	"	12/6	17/-	21/-	26/-	33/-	43/-
No. 326C.	Best quality	"	19/-	25/-	31/-	38/-	48/-	59/-

(No. 326C only made in Best quality).

ALL ABOVE SUBJECT TO USUAL DISCOUNT.

NOTE.

With order amounting to

£10

and upwards we present a
Handsome Plaster Model,
as shown,



measuring 25½ in. in height
and 9 in. × 8 in. base, which
makes a very effective
window attraction, and ex-
hibits Chest Protectors in
the most perfect manner.

For all other kind of Chest Protectors see GENERAL CATALOGUE, page 37, Part I.

LYNCH & CO., Limd., Aldersgate Street, LONDON, E.C.

Telephone Number, 1852.

Telegraphic Address—CHEMICUS LONDON.

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ACIDSBoulton, J., & Co. (Lim.)
ADVERTISING SPECIALTIES
Corsan, J. R. | Harris, J.**AERTD & MINERALS**Apollinaris Co.
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Burrow, W., & J. (Malvern)
Chemists' Aerated Waters Association, Lim.
Ellis & Son (Ruthin)
Hanyadi János
Ildris & Co., Ltd.
Ingram & Royle, Lim.
Mills & Co. (Bourne)
Roshack Springs, Lim.
Sallyco Water Co.
Wiesbaden Gout Water**DITTO PLANT**(See SYRUPS and ESSENCES)
Barnett & Foster
Bratby & Hinchliffe, Lim.
Tyler, Hayward, & Co.**AGNCIESABROAD**Australasian Drug Co.
Boissy
Kempthorne, Prosser & Co.
Lennon, G. B., & Co. (N.Z.)
Peake, Allen & Co.
Taylor & Colledge**ALKALOIDS**Howards & Sons (Cinchona)
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Smith, T. H., & Co.**ALMANACKS**Ford, Shapland & Co.
Silverlock, H. | Townsend, J.**AMMONIA**May & Baker, Lim.
White, A., & Sons
Woolley, Sons & Co.**ANALYSIS**Sutton, F., & Co.
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Berend, O., & Co.
Woolley, J., Sons & Co.**ASTHMA CURE**Fanyau & Co.
Potter & Clarke
BAKING POWDER
Goodall, Backhouse & Co.**BALSAM OF ANISEED**

Powell, T., Lim.

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Solport Bros.
Wood, Vincent**BATH SALTS**Sykes' Bath Salt
Tidman & Son, Lim. (Sea Salt)**BEESWAX**Bowdlear & Co.
Evans, Sons & Co.
Kemp & Son
Leonhard, T.
Lüneburger Waehsbleiche**BICARB. SODA**Brunner, Mond & Co., Lim.
Howards & Sons
May & Baker, Lim.**BIPALATINOLIDS**Oppenheimer, Son & Co., Lim.
BISMUTH PREP.
Hearon, Squire & Francis
Hewlett & Sons
Howards & Sons
May & Baker, Lim.
Sykes & Co. | Tyrer, T., & Co.
White, Alfred, & Sons**BONE MARROW PREPS.**Liquor Carnis Co.
BORAX
Howards & Sons**BOTTLES**Ayrton & Saunders
Barnett & Foster
Barrett, R. H.
Bratby & Hinchliffe, Lim.
Breffits, Lim.
Gilbertson, H., & Sons
Hearn, Wright & Co.
Isaacs & Co.
Johnsen & Jørgensen
Kilner Bros.
Lynch & Co., Lim. (Salts)
Maw, S., Son & Thompson
Poths, H., & Co.
Stipendium Stopper Co., Lim.
Toogood, W., Youldon, E.
Volcanic Aeration Co.
York Glass Co., Lim.**BOOKS**Dr. Muter
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Levis, H. K. | Loisset, A.
Martindale's Extra Pharm.
Squire's "Companion"**BOXES**Austin & Co. (Cardboard)
Ayrton & Saunders
Evans, Sons & Co.
Glover, C. H., & Co.
Kent, G. B., & Son
Kilner Bros.
Kinnors & Black
Patent Stopper, Box, and
Stamping Co., Lim. (Tin)
Robinson & Sons
Tinplate Decorating Co.**BRUSHES**Evans, Sons & Co.
Hovenden & Sons
Kent, G. B., & Sons**BUNSEN BURNERS**Berend & Co.
BUTTER COLR. & C.
Baker, J. W.
Boulton, J., & Co., Lim.
Hattrick & Co., Lim.
Miller & Co.
Tomlinson & Hayward**CACHETS**Christy, T., & Co.
Cooper & Co.**CACHOUS**Bleasdale & Co.
Blyton, Asley & Co.
Jackson, T.
Lloyd, T. H., & Co.
Raines & Co. | Warrick Bros.**CAMPFIRE**Howards & Sons
May & Baker, Lim.**CAPSULES**Davies, Gibbins & Co.
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Droege, Wm., & Co.
Duncan, Flockhart & Co.
Evans, Lescher & Webb
Hattrick & Co., Lim. (Dun's)
Hooper, B., & Co.
Lloyd, T. Howard, & Co.
Lofthouse & Saltmer
Warrick Bros.**CARBOLIC ACID**Mason, C. E., & Co.
Sanitas Co., Lim.
Stevenson, H. E., & Co.**CRBNIC ACID GAS**Carbonic Acid Gas Co.
London Carbonic Acid Co.
(Prospectus)**CSCRA SAGRADA**Anderson & Co.
Duncan, Flockhart & Co.
Evans, Lescher & Webb
Ferris & Co.
Harker, Stagg & Morgan
Moss, J. Co.
Parke, Davis & Co.**CASTOR OIL**

British Castor Oil Co., Lim.

CERESINE WAX

Boehm, Fredk.

CHALK, PRECIP.

Levermore, Aug., & Co.

CHECK TILLSO'Brien, T.
Stokes, G. R., & Co., Lim.**CHEMICALS**Boehm, Fredk.
Boehring, C. F., & Sohne
Boulton, J., & Co., Lim.
Brunner, Mond & Co., Lim.
Evans, Lescher & Webb
Evans, Sons & Co.
Farbenfabriken (Hayer & Co.)
Goodall, Backhouse & Co.
Graf, F. | Hill, A. S., & Son
Howards & Sons (Pharm.)
Lofthouse & Saltmer
Macfarlan, J. F., & Co.
May & Baker, Lim.
Moss & Co.
Oppenheimer, Son & Co.
Sanitas Co., Lim.
Scottish Acid & Alkali Co., Ltd.
Smith, T. H., & Co.
Stevenson, H. E., & Co.
Tyrer, T., & Co.
Washington Chemical Co.
White, A., & Sons
Zimmerman, F. M.
CHLOR. OF LIME
Government Sanitary Co.
National Chemical Co.
CHLORODYNE
Daviesport (Browne's)**CHEST PROTECTRS**Ayrton & Saunders
Liverpool Patent Lint Co.
Lynch & Co., Lim.
Maw, S., Son & Thompson
Newbery, F., & Sons
Schutze & Co.
Solport Bros.
Wood, Vincent**CHLOROFORM**Duncan, Flockhart & Co.
Macfarlan, J. F., & Co.
Smith, T. H., & Co.**CINCHONA BARK**

Graf, F.

COCA WINEBurrough, J.
French Hygienic Society
Harker, Stagg & Morgan
Holloway, E. A.
Kemp & Son
Lorimer & Co.
Stephen Smith & Co. (Hall's)
White, S. B.
Wilcox & Co.**COCAINE-HYDRO.**

Howards & Sons

COCOA & CHOCOLTCadbury Bros.
Caiffyn's Malto-Carnis
Van Houten's
Van Steen
Vi-Cocoa (Dr. Tibbles)**COD-LIVER OIL**Allen & Hanburys
Burroughs, Wellcome & Co.
Cuthbert, P.
Davies, Gibbins & Co.
Evans, Lescher & Webb
Evans, Sons & Co.
Hill, A. S., & Son
Kemp & Son | Lorimer & Co.
Moss, J., & Co.
Oppenheimer, Son & Co., Lim.
Smith, T. H., & Co.
Spratt's Patent (Dog Cakes)
Scott's Emulsion
Stevenson, H. E., & Co.
Wright, Layman & Umnay**COMES**

Hovenden & Sons

COMP. MEDICINES

Allen & Hanbury
Blyton, Astley & Co.
Burroughs, Wellcome & Co.
Davies, Gibbins & Co.
Hooper, B., & Co. | Leo & Co.
Lloyd, T. Howard, & Co.
Parke, Davis & Co.
Richardson, J., & Co., Lim.

CONCENT. LIQES

Baies Bros., & Co.
Davies, Gibbins & Co.
Fletcher, Fletcher & Co.
Lloyd, T. Howard, & Co.
Oppenheimer, Son & Co.
Randall & Son

CONFECTIONERY

Blyton, Astley & Co.
Gibson & Sons
Guest, T., & Co. | Hillaby, J.

CORKS

Ringrose & Cobb | Dooks, T.

CORN CURES

Beetham & Son
Gardner, C.
Potter & Clarke

COTTON WOOL

Robinson & Sons (Absorbent)

COUNTER FOUNTAINS FOR AERATED WATERS

Volcanic Aeration Co.
CRSHD LINSEED

Mumford, G. S.

CYDER

Symons, J., & Co., Lim.

DENTIFRICES, &c.

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Bromley, H., & Co.
Hovenden & Sons
Jewsbury & Brown
Luthien & Co. | Stevens, P. A.
Sutton, O., & Co.
Wilson, A.
Woods, W. (Arecia Nut)
Wright, Chas., & Co., Lim.

DENTISTRY

Browning, A. J.
Fentiman, A. G.
Fentiman & Co.

"DIMATOS"

Southall Bros. & Barclay

DISINFECTANTS

Beecham & Co. | Brooks, T.
Government Sanitary Co.
Hebden, W. C.
Jeyes Sanitary Compounds Co.
Kühn, B. Chinosol, Kresochine
Mackey, Mackey & Co.
Mason, C. E., & Co.
May & Baker, Lim.
National Chemical Co.
Ness & Co.
Peas, Holiday & Co.
Sanitas Co., Lim.
Tuson's Disinfectants Co., Ltd.
Tyrer, T., & Co.

DOG MEDICINES

Lloyd, T. Howard

DRUGGISTS' SUN.

Ayrton & Saunders
Barclay & Sons, Lim.
Bleasdale & Co., Lim.
Dailley & Wilkinson
Cartwright, J. S.
Evans, Lescher & Webb
Evans, Sons & Co. (Savars)
Fordham, W. P., & Sons, Lim.
Hatrick & Co., Lim.
Hovenden & Sons
Kahler, G., & Co.
Kay Bros., Lim.
Maw, S., Son & Thompson
May, Roberts & Co.
Newbery, F., & Sons
Potter & Sackler
Quelch, H. C.
Sanger & Sons | Schutze & Co.
Southall Bros. & Barclay
Tidman & Son | Toogood, W.
Wood, Vincent

DRUGS

Allen, S., & Sons (Grinders)
Eynon & Co.
Bleasdale & Co., Lim.
Davies, Gibbins & Co.
Dietrich, E. J.
Kahler, G., & Co.
Meinertzhagen, E.
Oppenheimer, Son & Co.
Phillips & Co. (Grinders)
Stevenson, H. E., & Co.

DYES, &c.

Hatrick & Co., Ltd. | "Diamond"

EAU DE COLOGNE

Farina, J. M.
Farina, J. M. (Ursula Listz)
Muhlen, F.
Van Oopen & Co.

ECZEMA

Cullwick's Skin Ointment

Cullwick's Blood Tablets

EMBRICATIONS

Bow's Liniment
Celladema | Day & Sons
Elliman, Sons & Co.
Harvey & Co.

Tuson's Disinfectants Co., Ltd

ENGRAVERS

Corsan, J. R.

ETHER

Duncan, Flockhart & Co.
Howards & Sons
Macfarlan, J. F., & Co.
May & Baker, Lim.
Robbins, J., & Co.
Tyrer, T., & Co.
White, A., & Sons
Woolley, Sons & Co.
Wright, Layman & Umney

ENEMAS

British-American Dall Nozzle
Evans, Sons & Co. (Co.)
Hartley & Co., Lim. ("Rack")
Lynch & Co., Lim.
Sanger & Son | Wood, Vincent

ESSENCES

Boulton, J., & Co., Lim.
Bovril, Lim. (Beet)
Bratby & Hinchliffe, Lim.
Brook, J., & Co.
Delbanc & Co.
Fletcher, Fletcher & Co.
Goodall, Backhouse & Co.
May & Baker, Lim.
Newball & Mason
Stevenson & Howell
Todd, A. M.
Tyrer, P. (Anchovies)
Woolley, Sons & Co.

ESSENTIAL OILS

Allen, S., & Sons
Blackwell, Hayes & Spilbury
Boehm, Fredl.
Bush, W. J., & Co.
Delbanc & Co.
Evans, Sons & Co.
Feustel, Friedrich
Jaison, J., & Co.
Kahler, G., & Co.
Lewig, Mark, Lim.
May & Baker, Lim.
Poppelreuter, W.
Ransom, Wm., & Sons
Sanitas Co., Lim.
Stevenson, H. E., & Co.
Stevenson & Howell
Symes & Co. | Todd, A. M.
Warrick Bros.
Wright, Layman & Umney

EUCALYPTUS OIL

Sanitas Co., Lim.
Tasmanian Eucalyptus Oil Co.

EXTRACTS, FLUID

Allen & Hanbury
Allen, G., & Co.
Bleasdale & Co., Lim.
Burgoyne, Burdidge & Co.
Davies, Gibbins & Co.
Evans, Sons & Co.
Fletcher, Fletcher & Co.
Heaton, Squire & Francis
Hooper, B., & Co.
Lloyd, T. Howard, & Co.
Moss & Co.
Parke, Davis & Co.
Potter & Clarke
Randall & Son
Ransom, W., & Son
Wright, Layman & Umney

EXTRACT MEAT

Armour & Co. | Brand & Co.
Liebig Co.
Liquor Carnis Co.

EXTRACTS, SOLID

Allen, G., & Co.
Randall & Son
Ransom, W., & Son

FEED BOTTLES

Burroughs, Wellcome & Co.

(Thermo Safe)

Evans, Sons & Co.

Gilbertson, H., & Sons

Hearn, Wright & Co.

Hovenden & Sons

Kilner Bros.

Lynch & Co., Lim.

Marriott, E., & Co.

Maw, S., Son & Thompson

May, Roberts & Co.

Shirley Bros. | Youlden, E.

FILTERS

Barkfield Filter Co.
Mason Filter Co.

FLY PAPERS

Bleasdale, Lim.
Buchan, D. D.
Ford, Shapland & Co.
Maw, S., Son & Thompson
Strong, Christy
Tunbridge & Wright

FOOD (Infants & Invalids)

Allen & Hanbury
Benger's Food
Bregg, J. L.
Brand & Co.
Christy, T., & Co.
Frame Food Co., Lim.
Goodall, Backhouse & Co.
Hawksley, T. (Steriliser)
Horlick & Co.
Kydde & Co.
Liquor Carnis Co.
Liebig Co. | Nestle & Co.
Mellin's Food | Lester, M.
Savory & Moore
Tyrer, P.
Vi-Cocoa (Dr. Tibbles)

FUNNELS

Von Poncet Glass Works

GELATINES

Boehm, F.

GINGER ALE

Bratby & Hinchliffe, Lim.

Chemists' Aerated & Mineral

Water Aeration, Lim.

Ellis & Son

Mills, R. M., & Co.

GLYCERINE

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Beehm, F. | Fink & Co.

Price's Candle Co., Lim.

GRANULAR PREP.

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Blyton, Astley & Co.

Loulton, J., & Co.

Davies, Gibbins & Co.

Evans, Sons & Co.

Heaton, Squire & Francis

Lloyd, T. Howard & Co.

Tyrer, T., & Co.

Wright, Layman & Umney

GUM

Fink & Co. (Arabic, &c.)
Graf, F.

HAIR PREP.

Alexandre's Shadeine
Brooks, J.
Chesebrough Co.
Depile Co.
Edwards & Co.
Thiellay, E. H.
Truett, H. P., Lim.

HERBEE EXTS.

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Newball & Mason
Potter & Clarke

HOMOGOPATHIC

Keene & Ashwell
Leath & Ross
Watson & Wates

HONEY

White, G., & Sons

HYPOPHOSPHITES

Duncan, Flockhart & Co.
Fellows
Fletcher, Fletcher & Co.
Symes & Co.
Tyrer, T., & Co.

INHALERS

Aroma Manufacturing Co.
Booth's Hyomei
Burroughs, Wellcome & Co.
Lynch & Co., Lim.
Martindale, W.
Sanitas Co., Lim.

INSECTICIDES

Barclay & Sons, Lim.
Bleasdale, Lim.
Jackson, T.
Sanitas Co., Lim.
Tunbridge & Wright

JELLIES

Warrick Bros.

KETCHUP

Tyrer, P.

LARD

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LAVERAND WATER

Jackson, J., & Co.

LEECHES

Fitch & Nottingham

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Christy, T., & Co.
Liverpool Lint Co.

Maw, S., Son & Thompson

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Lloyd, T. Howard, & Co.
Moss, John, & Co.
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LIQUORICE

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Hillaby, J. | "Solazzi"

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"Frog in your throat"

Gibson, R., & Sons (Manfrs.)

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Raines & Co. | Randall & Son

Stern, G. & G.

"Solazzi" | Warrick Bros.

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Gardner, W.

Melin, C. | Pindar, J. W.

Volcanic Aeration Co.

Wright, Fielder & Perkins, Lim.

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Anderson & Co.

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Burroughs, Wellcome & Co.

(Kepfers)

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tract Co., Lim.

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Lorimer & Co. | Moss, J., & Co.

Oppenheimer, Son & Co., Lim

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Raines & Co.

Raines, Clark & Co.

Robinson & Co.

Standard Malt Ext. Co., Lim.

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Davies, Gibbins & Co.

Evans, Gadd & Co.

Evans, Sons & Co.

Heaton, Squire & Francis

Hill, A. S., & Sons

Lloyd, T. Howard, & Co.

Washington Chemical Co.

MANICURE

Hovenden & Sons

MARKING INKS

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John) Ink and Pencils

MATERIA MEDICA COLLECTIONS

Southall Bros. & Barclay

MEDICINE CHSTS

Burroughs, Wellcome & Co.

Day, Son & Rewitt Veterinary

Day & Sons (Veterinary)

MENTHOL

Burroughs, Wellcome & Co.
Christy, T., & Co.
Evans, Lescher & Webb
Maw, S., Son & Thompson
Shirley Bros. | Tyrer, P.

MERCURIALS

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May & Baker, Lim.
Tyrer, T., & Co.

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Jones & Co. | Phillips, G., & Co.
Smith, S., & Co.
Warren, A., & J.

METHYLENE

Robbins, J., & Co.

MICROSCOPES

Darton, F., & Co.
Hicks, J. J.

MILK

Horlick & Co.
Nestle, H. (Condensed)

MORPHIA

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Smith, Bertie & Co.
Smith, T., & H., & Co.

OILS, &c.

Calvert Bros., & Co.

Hooper, B., & Co. Saneal Wood

OINTMENT

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(Lanoline)

Celladema

Chesebrough Co. (Vaseline)

Davies, Gibbins & Co.

Lloyd, T. Howard, & Co.

Stevenson, H. E., & Co.

OPTICIANS

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Darton, F., & Co.

Raphael, J., & Co.

OTTO OF ROSE

Warrick Bros.

OXIDE OF ZINC

Hubbuck, T., & Son, Lim.

Stevenson, H. E., & Co.

PALATINOLDS

Oppenheimer, Son & Co., Lim.

PASTILLES

Jackson, T.

PAT. MEDCNS, &c.

RENNET Duncan, Flockhart & Co. Evans, Gadd & Co. Lorimer & Co. Müller & Co. Tomlinson & Hayward RUBBER GOODS Powell & Barstow SALICIN Macfarlan & Co. Smith, T. & H., & Co. SALICYLIC ACID Burgoyne, Burdidges & Co. Kühn, B. Zimmermann, A. & M. SARSAPARILLA Potter & Clarke SAUCES, PICKLES Goodall, Backhouse & Co. Maw, S., Son & Thompson Tyrrer, P. SCHOOLS, &c. Central (Edinburgh) City School (Skerry's) Glasgow School of Pharmacy Liverpool School Manchester Col. of Pharmacy Metropolitan Col. of Pharmacy Newington College North of England School Northern College of Pharmacy Royal Dispensary (Edinburgh) Sheffield College of Pharmacy South London School of Pharmacy, Lim. The School of Pharmacy Westminster College SCIENTIFIC INSTRUMENTS Darton & Co. Hicks, J. J. SEA SALT Tidman & Son, Lim. SEEDS Potter & Clarke Spratt's Patent, Lim. (Bird) SEIDLITZ POWDERS Blyton, Astley & Co. Davies, Gibbins & Co. Hors & Co. Maw, Roberts & Co. SELTZOGENES Brabry & Hinchliffe, Lim. May, Roberts & Co. Volcanic Aeration Co. SERUM Greoff, R. W., & Co. SHAVING Hovenden & Sons (Excesses) Lloyd, A., & Co. (A. S. Lloyd's Excesses) Truitt, H. P., Lim.	SHEEP DIP Haresaugh & Co. Jeyes' Sanitary Compounds Co. Kühn, B. (Kresochine) Neis & Co. Sanitas Co., Lim. SHOP FITTERS Bowling & Govier Bygrave, J. & W. Evans, Sons & Co. Josephs, C. & Co. Josephs, Philip Treble, G., & Son Yates, W. S. SMELLING SALTS Mackenzie's Cure SOAP Blondeau & Cie (Vinolia) Brounley, H., & Co. Chamberlain & Co. (Spraguel) Cook, E., & Co. Fassett & Johnson Gibbs, D. & W. (Medicated) Huggins' Soap Works, Lim. Jameson, W. (Arsenic) Jeyes' Sanitary Compounds Co. Ludovic, A. (Pine Tar Soap) Mackenzie's, Dr. (Arsenic) Maypole Soap Syndicate, Lim. Muhlen, F. Pears, A. & F., Lim. Sanitas Co., Lim. Sharp Bros. Soap, &c., Co., Ld. Sinclair, J., & Son Tidman & Son Wright, Layman & Umney SPECTACLES Botwright & Grey Darton, F., & Co. Raphael, J., & Co. SPONGES Cohen, I. & M. Cresswell Bros. & Schmitz Peterson, M., & Co. 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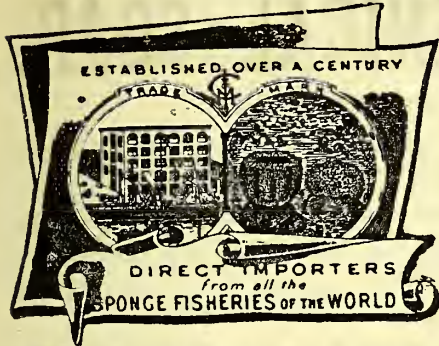
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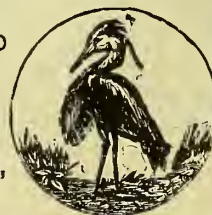
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No. 1, 1897.

CAN anybody offer an idea for making or saving money in the Chemists' trade? Something practical and perfectly novel.

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Summary.

THIS number begins our jubilee volume.

FURTHER notes on almanacks and calendars are printed on p. 9.

FORMULÆ are a feature of this number, many being given on pp. 37-40.

AMONG carbolic victims this week is a cashier to a London wholesale drug firm (p. 2).

WE recommence our post-card competitions this year. The first is announced on this page.

WE shall give more literary matter than ever this year. And better than ever, we hope (p. 24).

OUR Paris correspondent describes the entombment of Pasteur's remains at the Pasteur Institute (p. 5).

AN Aberdeen dispenser has been sent to prison for stabbing a woman whom he was courting (p. 4).

THE novelties described are a seamless enema, compound phenacetin tabloids, and antiseptic pellets (p. 9).

ANOTHER arrangement of artificial freezing (which improves upon Mr. Sage's idea) is reported on p. 17.

WE continue our articles on Röntgenography, with some observations on how to take a radiograph (p. 12).

WE give on page 18 some observations on a high-class pharmacy which has been opened in London recently.

A CONTRIBUTOR who has had long experience in drug-stores tells of some of the things which happen therein (p. 13).

THE West Australian sandal-wood oil industry has been stagnant for some years. The reasons for this are given in a note on p. 17.

WE are indebted to several subscribers for particulars regarding novel window-attractions which they had during Christmas week (p. 3).

TWO Italian chemists communicate an article in which they deal exhaustively with the characters and chemical tests for oil of lemon (p. 25).

MR. J. F. BROWN communicates several useful notes suggested by the "Druggists' Formulary" thereon—bromidia, Dobell's aperient and elixir aurantii (p. 30).

MR. A. P. BALKWILL, pharmaceutical chemist, of Plymouth, had the unsought honour of a visit from an escaped convict, who made free with some of Mr. Balkwill's property (p. 2).

A CHEMIST who got an interim licence from the Board of Inland Revenue for the sale of wines and spirits is prosecuted by the police, who do not recognise the validity of such a licence (p. 10).

DR. R. R. RENTOUL, the medical practitioner on the Medical Council who secured the largest number of votes at the recent election, gives us his views on the relations between doctors and chemists (p. 20).

THE drug-markets are extremely quiet at present and no changes of any consequence have transpired, except that camphor is 2d. per lb. cheaper, and the prices of bismuth salts have been revised (p. 27).

ANOTHER arsenical-soap case has been heard. The Wimbledon magistrates came to the conclusion that as there was, according to the prosecution, no arsenic in the soap it could not be a drug. They therefore dismissed the summons (p. 10).

MR. G. F. SCHACHT, one of the best known and most popular of British pharmacists, died on the day after Christmas day at Clifton. We also note the death of Sir George B. Owens, M.D., of Dublin, one of the original members of the Pharmaceutical Society of Ireland (p. 7).

A LARGE mass of correspondence is dealt with this week. Supporters and opponents of the P.A.T.A. are still discussing its merits and demerits. Messrs. Lambert & Co. reply sarcastically to Mr. Day's letter on the subject of the missg addresses from the Scott's Pills Memorial. Mr. Conroy says more about otto of rose—against us, this time (p. 30).



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The Examinations.

Christmas was not an unalloyed joy to many young pharmacists on both sides of the Tweed, for the Boards of Examiners were at work on Monday with the practical portions of the Minor and Major, which will continue all this week.

A Christmas Party.

Messrs. Ayrtton & Saunders entertained their representatives to a luncheon, on December 24, at the Adelphi Hotel, Liverpool. Mr. W. H. Saunders presided, and after the luncheon the toast of "Success to 1897" was given and heartily received. Social conversation relating to the trade furnished a pleasant and profitable afternoon.

The Convict's Visit.

The escape of convicts from Dartmoor Prison caused quite a sensation in the immediate neighbourhood during the latter end of last week. The one, Goodwin, who got clear away, had quite a good time of it up to his capture, at Devonport, on Sunday. The first house he approached, late on Christmas Eve, happened to be the residence, at Post Bridge, of Mr. A. P. Balkwill, of Balkwill & Co., chemists, Plymouth. He entered the house and annexed a long overcoat, a cap, and a pair of brown boots, together with a 6-lb. cake for emergencies. The inmates did not know anything of the visit until the morning, when the articles were missed and the windows found unfastened. The fugitive appears to have then walked on to Tavistock, where he entered another house and took a good meal off a turkey. His holiday was cut short by his arrest two days later.

The Wholesale Druggist and the Publican.

Mr. Edwin Hills, wholesale druggist, of Shrubland Road, Dalston, rented a stable of Mr. Barker, landlord of the Middleton Arms, Queen's Road, in the same district. Mr. Hills gave notice to quit, and then there arose a question as to certain new locks which Mr. Hills had substituted for the old ones. A quarrel ensued, and it was alleged that Mr. Barker knocked Mr. Hills down, and loosened two of his teeth. Police Court proceedings followed this, and last Saturday a settlement was arrived at, when both gentlemen appeared at the North London Police Court. Mr. D. A. Romain was solicitor for the druggist, and Mr. C. V. Young for the publican. Witnesses were called on both sides, those for Mr. Hills describing the blow as a forcible one and the language on both sides equally so, whilst on the other the violence was denied, and the allegation put forward that Mr. Hills had had so much to drink that a little push "drew him." In the end, Mr. Romain asked the Magistrate to teach the publican that he must not knock people about with impunity; and Mr. Young, for his client, pointed out what a serious thing it was for a licensed victualler to be convicted of assault. The Magistrate had no doubt Mr. Hills occupied quite as respectable a position as wholesale druggist as Mr. Barker did as a licensed victualler. He had no hesitation in saying, after hearing the evidence, that Mr. Hills was as completely in the right as Mr. Barker was in the wrong; but, taking all things into consideration, he would give the latter an opportunity of paying for an unjustifiable assault without being convicted of it. Mr. Young said his client offered 2*l.* 2*s.* as costs. The Magistrate: No; I think he ought to pay 3*l.* 3*s.* Mr. Barker agreed to pay this, and Mr. Hills consented to receive it after the expression of opinion from the Bench. Consequently the three *g* ir cas were paid and the summons withdrawn.

Drug-contracts.

The Marylebone Guardians have accepted the following tenders for the infirmary and the north and south dispensaries of the parish:—Hodgkinson, Prestons & King, 8 Bishopsgate Street Without, drugs, 210*l.* 19*s.* 11*d.*; Burgoyne, Burbidges & Co., 16 Coleman Street, E.C., sundries, 69*l.* 18*s.* 3*d.*

The Belper Guardians have accepted the tender of Mr. W. T. Burkinshaw, of Belper, for the supply of chemists' requisites for the ensuing quarter.

The Blackburn Guardians have accepted the tender of Messrs. J. Booth & Co., of Darwen Street, Blackburn, for the supply of druggists' sundries to the workhouse.

Mr. Gravett, New Romney, contracts to supply the Guardians with arrowroot at 1*s.* per lb., linseed at 2*d.* per lb., and ginger at 6*d.* per lb. to the workhouse and hospital during the next quarter.

Messrs. Geo. T. Cox & Sons, 35 Eastcheap, London, will supply the East Preston (Sussex) Guardians with carbolic soap at 15*s.* 9*d.* per cwt., carbolic soft-soap at the same price, arrowroot (in tins) at 3*d.* per lb., and Price's night-lights at 5*s.* 9*d.* per dozen boxes.

Casualties.

A fire occurred in the storeroom of Mr. Cave, chemist, Nevill Street, Southport, on December 24. Owing to the frequent explosion of photographic and other chemicals, the fire presented special difficulties to the brigade, and much stock had to be removed before danger was at an end. The estimated damage of 400*l.* is covered by insurance.

A fire broke out at the chlorate-house of the Gerard's Bridge Chemical-works, St. Helens, on Monday last. It is supposed to have originated through friction in the chlorate-mill, and the contents of the millhouse were considerably damaged by water.

Whilst Mr. Hutchings, a farmer of Pomphlett (Devon), was passing along Bedford Street, Plymouth, on Saturday last, his gun, which was loaded, slipped to the ground and the charge exploded. It happened to be pointing direct to the shop-entrance of Mr. Maurice, chemist, and the mahogany-framed glass door got badly damaged as a result. Luckily, no one was in the line of fire at the time.

An explosion of gas occurred on the premises of Mr. Bagley, chemist, Wolstanton, on December 23. Whilst a plumber was engaged filling a chandelier with water a loud report was heard, and it was found that gas had made its way from the private sitting-room to the shop, where it exploded. The shop-windows were blown out and considerable damage done to the stock-in-trade, while one of Mr. Bagley's daughters was seriously burnt about the head.

Carbolic Fatalities.

An inquest was held on December 22 on Edith Gertrude Dwelly, lately residing at Chelsea, but who had a short while before come from British Columbia, and who killed herself with carbolic acid through sorrow in consequence of a love-affair.

An inquest was held on December 23 on John Bartholomew Cook (72), who was found dead at his residence, Minehead. He had taken carbolic acid, and left a note saying his troubles were greater than he could bear.

Eleanor Nelson Tunnieliffe (36), wife of a Liverpool publican, had had three or four attacks of influenza, and had been low-spirited of late. On Saturday last she committed suicide with carbolic acid.

A tram-conductor named Henry Samuels (24), of 75 Canterbury Road, Old Kent Road, having a few words with his driver, went home and shortly after was found in bed by his sister in a dying condition. Death ensued from carbolic-acid poisoning.

Suicide of a Druggist's Clerk.

Mr. Hilleary, Coroner for West Ham, held an inquiry on Monday last concerning the death of Frederick Evans (49), a cashier, lately residing at 37 Latimer Road, Forest Gate. The widow stated that the deceased was in the employment of Baiss

& Co., wholesale druggists, of the City. For several years he had suffered from chronic rheumatism and bronchitis. On Tuesday of last week he did not go to business, as he said he was not well enough. He remained in bed until 2 o'clock, when he got up and came down into the kitchen, remarking that he felt very ill. The witness went upstairs to make the beds, but had only left the room a few minutes when she heard him scream out, "Mamma, I have poisoned myself." A glass and a bottle (produced) were on the table. The deceased was not in any pecuniary difficulties. Charles Evans, a brother, deposed that the deceased was in the habit of dining with him in the City every day. He had not been in good health. The witness was of opinion that the pressure of business at Christmas, combined with his illness, had quite upset him, and that he had taken his life during a fit of depression. The medical evidence proved that death was due to carbolic-acid poisoning, and the jury returned a verdict of suicide whilst temporarily insane.

Robbing Chemists.

Thomas Frederick Wood (37), a cash clerk, of Halesowen, was charged before the Birmingham City Stipendiary on December 24 with having stolen 10s., the money of his employers, Messrs. Blackwell, Hayes & Spillsbury, manufacturing chemists, Moor Street, Birmingham. For certain reasons Detective-sergeant Lyttle sent a woman into the office with 10s. of marked silver to pay for goods to that amount. At the end of the day it was found that the item of 10s. had not been recorded in the receipts-book, as it should have been; and Lyttle, on searching the prisoner, discovered the incriminating coins in his pocket, together with gold and silver amounting to over 15l. The prisoner pleaded guilty, and Mr. Baker, on his behalf, urged that he had had a previous good character, the loss of which would prevent him getting another situation, while he would also lose his licence for a public-house at Halesowen. In answer to the Stipendiary, the prosecutor, who said he did not wish to unduly press the charge, added that he was afraid the robberies had been numerous and extended over a long period. Mr. Colmore gave prisoner an opportunity to redeem his character by fining him 10l. and costs, or in default a month's imprisonment.

Charles Cooper, *alias* Johnson, of no fixed abode, was charged at Barnsley Police Court, on December 24, with stealing cough-lozenges and twenty-one teething-rubbers, value 6s., from the shop of Mr. John L. P. Hollingworth, chemist, Barnsley. Prisoner pleaded guilty. Stephen Henry Wiltshire, prosecutor's manager, said that on Monday afternoon he heard a noise in the shop, and turning round saw the prisoner going out of the shop with a box under his arm. Witness missed a box containing about 4 lbs. of cough-lozenges and also a number of baby-soothers. The prisoner, who said he came from Leicester, was sent to gaol for one month.

The Chemists' Club.

The billiard prizes, given by Mr. Boutall, have been won by the following:—1st, Mr. Nichols, 8 Station Road, Walthamstow; 2nd, Mr. Garman, 278 Roman Road, Bow; 3rd, Mr. Goodall, 1 Elm Park Terrace, Fulham Road; 4th, Mr. Robins, 59 Capel Road, Forest Gate. The prizes will be presented at the next smoking-concert, which will be held about the end of January.

Christmas Windows.

Mr. Fred Bates, chemist and druggist, Slaithwaite, near Huddersfield, succeeded in drawing the crowd during the week before Christmas by a good attraction. In his window he put a large glass jar with a tube-tap, and filled the jar with water tinted blue with litmus. Underneath was a glass basin containing a little acid, so that as the water slowly dropped into it it became red. The idea was to get people to guess how long the water would take to flow into the basin, and for this purpose they were supplied with a printed slip containing the following wording:—"Bates' second Christmas competition, free coupon. How long will the water take to run from the top jar to bottom jar? Only one coupon can be sent by each person. All coupons to be returned on or before Saturday, December 19. The water will take _____ hours _____ minutes to run out.

(Name and address.) See window for result." The competition started on Monday, December 14, and 1,028 coupons were sent in. The guesses varied from 10 minutes to 266 hours. The actual time was 51 hours, 36 minutes. Four prizes were offered—viz., 5s., 2s. 6d., 1s. 6d., and 1s.

Mr. J. Young, chemist, Torquay, made a Christmas window which caused some stir in the place. He filled a window with virgin cork, moss, ferns, and the like, placing a fountain in the centre, in the bowl of which was a supply of gold-fish. Perfumes in cut-glass bottles, elegantly finished off with silk, were cunningly arranged amongst the cork, and the attraction was enhanced by mirrors at the back and sides. In the evenings the window was illuminated by the best lace-pattern fairy lamps. The window was a thoroughly good one from the business point of view.

Mr. Herbert W. Seeley, chemist, Halifax, always makes a feature of his show-window at Christmas time. This season he draped it nicely, and made an artistic arrangement of perfume-bottles, artificial violets, lilac, and foliage giving it quite a fresh look. Baskets of flowers suspended from the ceiling were a touch which "fetched" people.

Coroner and Chemist.

On Wednesday, at the Battersea Coroner's Court, Mr. A. Braxton Hicks held an inquest upon the body of John Wallbank, aged 14½ years, the son of a waiter, residing at Battersea, who died on Monday last from the effects of injuries received through an iron door falling upon him at Messrs. Hudsons, provision merchants, Picnic, where he was employed as a messenger, &c. He was at home for some time after the accident. His mother thought he was bilious, and sent to the chemist for a bottle of medicine. The Coroner: What did the chemist know about it? Witness: Well, we explained to him what the boy was suffering from. The Coroner: That is very strange. I should not like to be the chemist to prescribe for people in that fashion. Well, I cannot help it.



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Drinking S.V.M.

Arnold Sutton, commercial traveller, Dublin, tried last week to get outside ½ pint of methylated spirit. A stomach-pump saved an inquest—it is supposed. On his recovery he will be charged with attempting to commit suicide.

Fire.

A fire broke out on Monday on the premises of Messrs. W. H. Bell & Co., chemists and druggists, North Street, Belfast. The upsetting of a light by one of the window-dressers caused the fire, which was extinguished by the employés.

Guardians Surcharged.

The Local Government Board refuses to recognise certain payments for drugs and medical appliances authorised by the Guardians of the Tipperary Union, and the Guardians have been surcharged 105l., the amount disallowed.

The Virtues of Soda-water.

According to the dispensary officer of the Croom Workhouse, soda-water is ordered by him for the use of the inmates, in lieu of medicines, as it is much cheaper and often found more useful. He denies the charge that he has ever given soda-water as a luxury, and says the article is not considered as such by the paupers, as the average daily consumption of soda-water is only one-thirteenth of a bottle per head.

An Unlicensed Compounder.

Winifred Teelan, who contrived to gain admission to the surgery of the workhouse dispensary officer at Bortisokane, and destroy almost all the medicines by either mixing the drugs or breaking the stock-jars before she could be stopped, has been declared a lunatic, and confined in Birr Bridewell.

The Doctor and the Nurse.

The dispute between the Armagh Workhouse doctor and the infirmiry nurse has been disposed of by the Local Government Board in a letter to the Guardians, stating that the nurse acted improperly in administering medicines to the patients without the medical officer's authority, and in unduly interfering with the drugs in the surgery.

Private Marks.

The Guardians of the Strabane Union are looking sharply into the question of the Poor-law contracts, and have appointed a committee of inquiry to see what truth, if any, there is in the allegation that private marks are put on the samples, and that these marks are known to certain Guardians.

No Damage Proved.

We reported, on October 17 last, the case of Mary McCarthy v. Timothy Scannell, apothecary, of Cork, who was brought before Mr. Justice Holmes, and by him remitted for trial to the Recorder of Cork. The trial has now taken place. Mrs. Goulding, daughter of the late Thomas McCarthy (68), testified that on Sunday, March 29 last, she went to Dr. Scannell's establishment, and asked for Mr. Wall, the usual assistant. He was not there, and then she asked Dr. Scannell for one of the sleeping draughts Mr. Wall had been in the habit of giving her. He asked what was the matter with her father, and she told him he was not well for some time, and Dr. Scannell turned round, took a bottle from a shelf, and poured out some white powder. She went away with it and administered it to her father with hot milk. In a few minutes her mother noticed him clench his hands behind his head, and witness ran to the bed and saw him working. She screamed that she had got a wrong medicine. Dr. O'Sullivan was sent for, and came immediately, and they sent for Dr. Scannell at his request. Dr. O'Sullivan did all he could for her father, who died about 8 o'clock the next morning.

Dr. O'Sullivan said he analysed what was left in the glass, and found it to be a salt of morphia. The deceased was suffering from narcotic poisoning, and was dying at 10.20 P.M. As the drug was administered at 9 P.M. deceased must have got a big dose. He sent for Dr. Scannell through professional etiquette, and Dr. Scannell said the deceased might sleep it off, and witness said he might, in a sarcastic way. The case was absolutely hopeless. He attributed death to the drug.

Much evidence was given as to the deceased's earning capacity, and as to those dependent on him, and ultimately his Honour said there was no case to go to the jury, as in his opinion, as a matter of law, there was no evidence of pecuniary loss. He directed a verdict for the defendant.



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Aberdeen Junior Chemists' Association.

The annual concert was held on Wednesday, December 23, in the Trades Hall, Mr. A. Craig in the chair, several of the leading chemists of the city supporting him, about three hundred persons being present. An excellent concert pro-

gramme was presented, the most pharmaceutical item being a C. & D. parody, "Druggy Harry," which was sung by Mr. Cran, with an accompaniment of limelight views. Mr. J. Porter (Hardie & Co., photographers) delivered a lecture on "A Tour Over the Scottish Alps with a Camera," exhibiting many excellent slides of mountain scenery. Good use was made of the lantern throughout the evening, views of "dark Lochnagar" being also shown while Miss Milne was singing about the famous mountain, and while Miss Wilson lifted "Oh! for the Bloom of My Ain Native Heather."

We are asked to state that the annual *conversazione* and dance will be held in the Trades Hall on Tuesday, February 9. This is promoted by the Senior and Junior Societies of the city, and tickets may be had from Messrs. Clark, Craig, Cruickshank (Secretary, Senior Society), Leslie, Bremner, and Philip (Secretary, Junior Society).

Mont Blanc at Glasgow.

At the meeting of the Glasgow and West of Scotland Pharmaceutical Association on December 17, held in the large hall of the Philosophical Institution, Mr. W. L. Howie, F.C.S., gave his popular lecture entitled "From Mont Blanc to the Matterhorn," illustrated by lantern-photographs. The company, which was a large one, included a number of ladies. Mr. Howie was cordially thanked for his lecture.

Glasgow Preparing for the Conference.

The Executive of the Glasgow Local Committee in charge of the arrangements for next year's meeting of the British Pharmaceutical Conference, to be held in Glasgow from August 9 to 12, are this week issuing to chemists and others in the West of Scotland a circular inviting subscriptions. The circular says: "It is twenty-one years since the Conference visited Glasgow, and on that occasion the members received a very cordial welcome. Surely 1897 will not be behind 1876. It is estimated that a sum of from 200% to 250% will be required for the local fund." The circular is signed by Mr. Robert Macadam, Mr. John Walker, and Mr. J. Anderson Russell—the Chairman, Treasurer, and Secretary of the Executive of the Local Committee.

Society of Chemical Industry.

A meeting of the Scottish section was held in Edinburgh on Tuesday, December 22, 1896, Mr. John Laing presiding. Mr. J. B. Readman read a paper on "The Removal of Organic Matter from Potable Waters." In the paper were recorded the results which had attended the employment of alum-cake in removing peaty colour and odour from the water of the reservoir constructed at Forrestfield, near Bathgate, eighteen months ago. By experiments made in the laboratory it was ascertained that the addition of 3½ gr. of alum per gallon, or 1 lb. for every 2,000 gallons of water, threw out practically all the colouring matter from the water in about twelve hours. In carrying out the actual treatment of the water-supply, the alum, in the form of alum-cake, guaranteed to contain 14 per cent. of soluble alumina, and not over ½ per cent. of uncombined sulphuric acid, was applied from a raft moored in the reservoir itself. A month after the treatment was begun the water had immensely improved, and two months from the commencement—about May 30 last, when the treatment stopped—the water was in every respect equal to that supplied to the city of Edinburgh. As a million gallons of water were daily drawn from the reservoir, the quantity of alum-cake required would be about 5 cwt. per day, at a cost of 7s. 6d. or 10s. a day.

Extraordinary Conduct of a Chemist.

James Brown, described as a chemist, but not on the register, of 19 Skene Square, Aberdeen, was charged at the Aberdeen Sheriff's Court, before Sheriff Brown, on Tuesday, with having twice stabbed a domestic servant named Ann Stewart, residing at 77 Regent Square, Aberdeen. He pleaded not guilty. The complainant's evidence was to the effect that accused had been called in to dress her mother's finger, which had been crushed in a door about nine weeks ago, and that he began to pay her attentions, but she did not approve of his advances. She had "lost a man," to whom she had been engaged and to whom she was to be married at Christmas, owing to the accused coming about the house. Accused

threatened to murder her if she married the other man. Early in November last accused stabbed her in the right shoulder, but the wound was slight, and as he apologised she did not complain to the police. On December 19 accused asked her to go out for a walk with him, and when she refused he stabbed her on the right thigh with a lance. The wound bled freely, and ran on to the floor. Witness had ascertained that accused was married, and taxed him with it, but he denied it. She denied that she allowed accused to use familiarities with her. It was stated, in answer to the Sheriff, that accused had been examined by Dr. Matthew Hay, who considered that, although he was of weak mind, he was quite accountable for his actions. Complainant's mother said her daughter encouraged the accused. When he saw the wound bleeding on December 19 "Dr." Brown said he did not mean to do it, that it was a joke, and that he would dress the wound. A neighbour, who saw the accused stab Stewart, said it was deliberately done, and that when it was proposed to bring a policeman Brown said "For God's sake don't bring a policeman here." Dr. Knowles, 49 Marischal Street, said accused was not in his employment, but that he came in and out of his shop to assist him. He sometimes dispensed medicines for him, and when he could not attend a patient, himself, Brown sometimes went. When he was called to attend complainant's mother, he could not go himself, and Brown went. He did not know that Brown was called doctor. He entered the visits made by Brown, because he attended the case himself afterwards. Mrs. Stewart might have thought Brown was a doctor. He had been doing doctor's work for her so far. The Prosecutor: With the result that the woman's finger is not better yet? Witness: The finger was crushed a good deal, and might have been amputated. Sheriff Brown, who remarked that this was an extraordinary case, found both charges proved. He failed to see it in the light of a joke, and sentenced accused to be sent back to prison for fourteen days.

French News.

(From our Paris Correspondent.)

PHARMACEUTICAL SOCIETIES AND "CUTTELS."—The *Chambre Syndicale des Pharmaciens de la Seine* recently refused an application for membership from a suburban pharmacist on account of the excessively low prices at which he supplied benefit and other societies. This question is attracting some attention just now, but no good scheme seems to have yet been proposed to stop the constantly increasing discount on the tariff prices.

FIRE AT THE MONTPELLIER SCHOOL OF PHARMACY.—The Superior School of Pharmacy of Montpellier has been damaged by a fire that destroyed an adjacent building. A complete collection of theses contributed by students since the foundation of the school, a herbarium of medicinal plants collected by Professor Planchon, and Professor Gay's bound volumes of periodical pharmaceutical literature were burnt, as well as many other valuable scientific works.

KEEPING CHRISTMAS ABROAD.—The British chemists in Biarritz held their first dance of the season on Christmas eve. It was a great success. The company numbered about forty, and dancing commenced at 9.30. Mr. E. C. Evans, a popular member of the British community, acted as M.C., and at supper proposed the toast of the ladies, which was responded to enthusiastically by all the gentlemen present. Dancing continued until 3.30 A.M., and the fête closed with "God save the Queen."

THE "SPECIALITY" QUESTION.—M. Collard, of Mar-sailles, still leads the Southern crusade for the total suppression of proprietary medicines. This eloquent pharmacist is Secretary to the Editorial Committee of the *Pharmaceutical Bulletin of the South-East*, the official organ of the local Societies. A zealous lieutenant is M. Fortuné, of Béziers, who contributes a slashing article, "Down with Specialities," to the current number. M. Fortuné points out that so long ago as 1848 Professor Gay, of Montpellier, declared that specialities would kill pharmacy, "but the realisation of this prophecy has been reserved for the present generation."

M. SONNERAT AND HIS PHARMACY.—M. Sonnerat, President of the Paris Society of Pharmacy for 1897, is, unlike many of his predecessors, including last year's President, Professor Villiers, a pharmacist in business. He is about 50 years of age, and short in stature. His hair and moustache are grey. When, as Vice-President, he occupied the chair at the monthly meetings of the Society, in the absence of the President, it was noticed that he spoke in a rather inaudible tone, but habit will no doubt give his voice the proper pitch. He will probably make a dignified president. A few days ago a C. & D. representative called at his pharmacy in the narrow rue Gaillon, which is in the very heart of Paris, mid-way between the Grand Opera and the Stock Exchange. In course of conversation M. Sonnerat mentioned that the pharmacy is of historic interest. It was originally owned by J. B. Caventou, of quinine fame, and afterwards by his son, M. Eug. Caventou, now Vice-President of the Paris Academy of Medicine. "I have occupied this *officine* for twenty-seven years," he added, "and scrupulously respect its traditions. I have made no attempt to adopt the modern style, and I have never taken up the sale of specialities." He pointed to the long rows of old jars with Latin inscriptions, the carved uprights, and the handsome certificate awarded to J. B. Caventou by the Institute of France in 1827 for the discovery of sulphate of quinine. There are three dispensing counters in the shop, each occupied by a busy pharmacist. In speaking of analytical work M. Sonnerat mentioned that he is believed to do more analyses than any other chemist in business in Paris. M. Yvon also does a great many, but he is no longer in the retail trade. A visit to M. Sonnerat's pharmacy must be highly interesting to chemists who think that their craft is worthy of being called a profession, rather than a business to be conducted on pushing grocery-lines.

THE "TRANSLATION" OF PASTEUR'S REMAINS from Notre Dame to the Institute in the rue Dutot that bears his name, took place last Saturday morning, with all the dignity worthy of the occasion. After a strictly private religious ceremony at the cathedral, the body was escorted to its new resting-place by the members of the Pasteur family and a few of the deceased savant's friends and fellow-workers of the Institute. About 200 persons, mostly scientists, members of the Government, and officials, took part in the ceremony. The English delegates, who included Sir Joseph Lister, Sir John Evans, Sir Dyce Duckworth, and Sir William Priestley, M.D., MP., were conspicuous in the black-coated throng by their picturesque robes in which red was the dominating colour. There were only a few wreaths, some of them sent by English societies. These were the only flowers put in the crypt. There was one bearing the inscription "To Pasteur from a grateful patient, Henry Greville." The crypt was lit up by bronze chandeliers on the altar and large wrought-iron candelabras suspended from the central cupola. When the coffin had been placed on the massive sarcophagus prepared for its reception, and an abbé had recited the last words of the Prayers for the Dead and pronounced Absolution, M. J. B. Pasteur came forward and said—addressing the Council of the Pasteur Institute—"Messieurs, into your charge we give the tomb we have erected to my father. We commend it to your care in this Institute he loved so much." The President, M. Bertrand, replied: "The Council of the Pasteur Institute thanks the family of the illustrious founder for their act of piety. Thanks to them, pilgrims from all parts of the world who come to honour the memory of the great benefactor of humanity will be able to meet here and meditate at his tomb." Then followed a number of speeches, some of them worthy to rank in the classical literature of oratory. M. Rambaud, Minister of Public Instruction, expressed, in the name of the Government of the Republic, the gratitude of the nation towards a Frenchman who has rendered to his country more services than any other country has previously received from one of its children. "In olden days," M. Rambaud said, "people beheld wonders worked at the tombs of saints. Pasteur's tomb will be surrounded by a halo of miracles." He also quoted Sir Joseph Lister's saying, that Pasteur's methods have illumined the darkness of surgery and robbed it of its terrors. M. Pierre Baudin, President of the Paris Municipal Council, and many other French dignitaries, also spoke; so did Sir Joseph Lister and the other English delegates. At the conclusion, those present passed before the tomb, saluting

Mme. Pasteur and the members of the family. The crypt was much admired as a work of art. The idea for Pasteur's tomb is said to have been indicated by M. J. B. Pasteur. The tomb is modelled after that of Galla Placidia, at Ravenna, described in the *Archéologie Chrétienne* of M. André Pératé. It is estimated that upwards of 25,000 persons visited it last Sunday. Many of the visitors laid offerings of flowers at the sarcophagus.

Foreign and Colonial News

CANADIAN ALCOHOL costs about \$1.15 per gallon. The same stuff can be obtained in the United States at 35c. a gallon. The reason for the higher price of the Canadian spirit is that the Excise duty is \$2.80½ per gallon, and the import duty \$3.71¼. The drug-trade of Canada (we learn from the *Canadian Druggist*) do not like this, and have appealed to the tariff Commissioners to adjust the matter, thinking that 20 per cent. *ad val.* duty instead of 250 per cent. is quite enough protection.

PHARMACY IN ONTARIO.—The Ontario College of Pharmacy has brought an action under the Pharmacy Act against the Robert Simpson Company (Limited), who have a drug department in their store at Toronto. The department is under the charge of a Mr. Lusk, a duly registered pharmacist of the province, who receives a weekly wage, but holds shares in the company. The case was heard by a magistrate, who dismissed it, and on appeal it has been argued before Judges Boyd, Ferguson, and Robertson, there being Q.C.'s on each side. Judgment has been reserved, but the case may break down on a technicality.

CHEAPENING MEDICAL FEES IN BRITISH GUIANA.—Doctors' fees in British Guiana must be very high indeed, to judge by the "innovation in local medical practice" upon which three medical men in Georgetown, the capital of the colony, have just ventured. These gentlemen—Drs. Deane, London, and Wills—have opened a dispensary, at which they propose to attend in turn to give "advice and medicine" to the poorer classes at half-a-crown for each consultation. The dispensary was opened with some ceremony on November 30 last. Its promoters are careful to point out that theirs is not a charitable, but a commercial, undertaking. Half-crown fees have hitherto been unknown in Georgetown, and the poorer classes consequently resort almost without exception to hospitals.

FLOODS IN MONTSERRAT, WEST INDIES.—Messrs. Evans, Sons & Co., of Liverpool, send us particulars of the great storm which swept over the West Indian island of Montserrat in the night of November 28th. The storm lasted for twenty hours, during which time over 20 inches of rainfall were registered. At one time in the early morning 2 inches of rain were caught in a rain-gauge within thirty minutes. Houses situated near watercourses were carried away into the sea. One house, containing several people, was carried over the parapet of the bridge on the west side of the town of Plymouth. About fifty people were drowned. During the storm the British barque *Grecian*, 1,272 tons, from Trinidad to London, *via* Guadaloupe, went ashore on the N.E. side of the island and became a total wreck. The captain, twenty-seven hands and one passenger were drowned, and only one life, that of the third mate, Tim Keogh, was saved. The new roads and bridges recently constructed by the Government have been swept away, and only one bridge in the island is left standing. Deep guts are cut across and along the roads, one being 40 yards long, 20 feet wide, and 10 feet deep. A considerable extent of coffee and cocoa plantations and one field of young lime-trees belonging to the Montserrat Company (Limited) have been washed away. One of the company's lime-fields is covered with rocks and *débris* washed down from the mountains to a depth of 8 feet, some of the rocks being 6 feet square and weighing several tons. The damage was least on the side of the island on which the company's estates are situated. No damage is reported to the company's buildings, or to the raw and concentrated lime-juice awaiting shipment.

TAX-FREE ALCOHOL Evidence is now being taken in New York in regard to the proposed repeal of the Internal Revenue tax on alcohol. Representatives of the retail and wholesale drug-trades have given evidence, proprietary-medicine dealers also being represented.

THE PAN-AMERICAN CONGRESS, which has recently been held in Mexico, was most interesting, says the *Pharmaceutical Era*, all the countries being represented either by delegates or by proxy. No country is allowed to send more than two official delegates, and, as a matter of fact, there was but one official delegate from the United States, but there were about 200 U.S. citizens present, representing various societies, schools of learning, &c. The meetings of the Congress were divided into sections, and Professor J. P. Remington was made chairman of a committee authorized to establish the pharmacopœial reforms contemplated, under the direction of the International Executive Committee of the Congress. It is expected that means will be found before the next meeting of the Congress to accomplish a practical uniformity of Pharmacopœias between the different countries. Dr. Rushy was made chairman of the International Commission on the Pan-American Medicinal Flora. This Commission expects to obtain and digest all possible information concerning American medicinal plants, and to place the results at the service of Professor Remington's International Commission on Pharmacopœia.

PHARMACY AMONG THE AZTECS.—Dr. D. Luis Comenge who says *La Farmacia Española*, has been devoting attention to the question of the knowledge of pharmacy among the Aztecs of Central America, finds that they possessed considerable skill in the healing art, and processes which marked a high degree of civilisation. They maintained asylums for the invalided soldiers of their armies, hospitals for the aged and infirm where the efficacy of the various remedies could be tested more or less in detail. They also supported zoological gardens of considerable importance, and botanical gardens with plants methodically classified. Their therapeutical knowledge is testified by the historians Hernandez, Humboldt, Flores, Clavigero, and others, on the authority of ancient Aztec documents. Cassia fistula, tamarinds, nentle (pulque), and hoazin, the last-named being a species of tamarind from whose leaves and green pods acid and sugared beverages were made, were given as laxatives; cathartics including the seeds of *Nicotiana glauca*, Mexican aristolochia, valerian or cuiltlatli, the root of amamaxtla, a species of rhuarh, and above all jalap were in use. Jalap rejoiced in these days in the concise name of tlalantlacuiltlatilli. For restraining the vomiting of babes they employed *Artemisia mexicana*. It is probable that the Aztecs only employed narcotics for dulling the sensibility of those who were destined for sacrifice. In any case they used *Cannabis indica* and *Datura Stramonium*. For combating certain nervous states, spasms, and convulsions they administered the juice of the artemisia. Among special excitants the chilli and the nentle were in general use, while tobacco and *Veratrum Sabadilla* were also employed. As diuretics *Cupressus Montezuma* H., *Balsamo sonsonatensis*, the bulbs of zozoyatil *Mirtus Pimenta*, *Taxetes erecta*, *Centaurea Cyanus*, *Atropa dentata*, and the *Magnolia glauca* are named, and as a remedy for stone and gravel a species of *Aristolochia* was recommended. Various soporifics were administered, and in catarrhal troubles they gave *Salvia Hispanica*, resin of pines. They treated wounds with urine, the sprouts of the maguey roasted, leaves of the *Schinus molle*, tobacco, ointments, fermented liquors, and preparations in which entered vegetables and the flesh of birds and snakes. Fever-remedies and tonics are also named by Dr. Comenge.

THE manager of a drug company sends us the following orders:—

"1 Gumuecham."

"Gum Harrowick"

"Malgamated of Potash."

"For Ring Worm. Please make a small quantity of ammonia from gas tar."

"One bottle of akanight in the lickwid a fever 2 powders for a girl eight one box of clarks nightlights a maws feeding bottle a large maws til ore 3 teething powders 2 tins of condensed milk."

Marriage.

TALINTYRE—BROWN.—On December 6, at St. James's, Holloway, by special licence, W. J. Talintyre, chemist and druggist, of 144 Stroud Green Road, N., to Ellen Sunley, younger daughter of Mr. John Brown, of Holloway.

Deaths.

BAKER.—The death occurred on December 23 of Mr. Alderman Baker, chemist and druggist, Harnet Street, Sandwich, at the age of 55. In his time Mr. Baker was an active public man, being elected Mayor in 1876, appointed Alderman in 1881, and made a J.P. of the borough in 1882, besides being elected to all the important local governing bodies. He had only recently retired from business.

COOK.—On December 22, Mr. Robert Cook, manager of the Atlas Chemical-works, Widnes, at his residence, Hall Nook, Penketh. Aged 67.

GREENSILL.—On December 15, Mr. Henry William Greensill, chemist and druggist, Fishponds, Bristol. Aged 61.

MASON.—On December 22, Mr. John James Mason (partner in the firm of Messrs. Brand & Co., Mayfair), at his residence, Albion House, St. Peter's Square, Hammersmith. Aged 63.

SIR GEORGE BOLSTER OWENS, M.D., and L.S.A. (Ireland). who for many years filled a conspicuous place in the public and social life of Dublin, died, on December 29 at his residence in Lower Baggot Street, Dublin. He was 88 years of age, and had been a licentiate of Apothecaries' Hall, Dublin, since 1832. He subsequently became a member of the Court of Examiners of that body, and obtained the degree of M.D. at Glasgow University in 1850. He was one of the twenty-one gentlemen nominated as members of the first Council of the Pharmaceutical Society of Ireland by the Act of 1875, and for some years he took an active part in its proceedings. There were few Dublin citizens better known or more highly respected than Sir George Owens. In 1876 he filled the office of Lord Mayor, being knighted during his year of office by the Lord Lieutenant, and in 1881 was High Sheriff of the city. He was an uncompromising Conservative in politics, but his kindly disposition and courteous manner made him popular with all parties in the Council. For forty-six years he was a guardian of the South Dublin Union, and Chairman of its Dispensary Committee. For a number of years he was one of the physicians of the Meath Hospital, and afterwards became one of its governors. He held the commission of the peace for the city.

QUICK.—On December 21, at Trowellard, St. Just, Mr. Richard Quick, chemist and druggist. Deceased, who was a native of St. Ives, served his apprenticeship with the late Mr. W. C. Hemmings, of Penzance, and he subsequently proceeded to London, where in course of time he qualified as a surgeon, and eventually practised for 46 years with conspicuous success in the West. Mr. Quick was well known as a hunter.

SCHACHT.—By the painfully sudden death on Saturday, December 26, of Mr. George Frederick Schacht, pharmaceutical chemist, English pharmacy has lost one of its most intelligent exponents and Bristol one of her most notable citizens. Mr. Schacht was in his 74th year, but one would not have called him an aged man; physically he was alert and mentally keen to the end, but those who knew him well could not avoid remarking that occasionally during the past three or four years he looked haggard and worn, and the last time we saw him he spoke of a malady which gave him a twinge now and then. That, as events have shown, was heart-weakness. Mr. Schacht was in his usual health and spirits on Christmas Day, but on Saturday morning he did not come downstairs at his customary hour, and a few minutes afterwards he was found dead in his bedroom. This was at his residence, Windsor Terrace, Clifton. It is so recently (*C. & D.*, March 14, 1896, page 392) that we sketched Mr. Schacht's career on his retirement from the Pharmaceutical Council (where he had served twenty-five

years), that we need now recall the chief facts only of his pharmaceutical career. He was apprenticed to Messrs. Savory & Moore, and while there became, in 1842, an associate of the newly-founded Pharmaceutical Society. Soon after he entered the School of Pharmacy, being one of the first students, distinguishing himself in chemistry, materia medica, and pharmacy, and passing the Major examination in August, 1845. His Major diploma was No. 2. In the year before he had published his first paper, and for twenty years he was constantly writing on pharmaceutical subjects which he had investigated practically, the most lasting achievement being the invention of liquor bismuthi, which he perfected in 1855. While he was working on the practical side of pharmacy he was also interesting himself in the improvement of pharmaceutical education, and his many utterances on this subject made him the high priest of the curriculum movement. The only mistake



he made in this matter was his failure to recognise that all pharmacists are not Schachts. He may have aimed too high, but when he spoke a high aim was needed, if only to get the standard raised a little from the low level which was adopted in 1868. During his membership of the Pharmaceutical Council, Mr. Schacht served as vice-president from 1879 to 1882. He was President of the British Pharmaceutical Conference (of which he was an original member) in 1878 and 1879, and took a keen interest in its proceedings to the end. A few years after obtaining his diploma he removed to Bristol, where he carried on business in Regent Street, and was joined later by Mr. A. Towerzey. About fifteen years ago an amalgamation was made with the firm of which Mr. R. W. Giles was the head, the style of Giles, Schacht & Co. being adopted. His attention was particularly directed to the manufacturing part of the business, but he definitely retired a year ago. Up to the very last he displayed the liveliest interest in the Bristol Pharmaceutical Association, and probably the last letter he wrote was one sent to the local Secretary, Mr. B. Keen, on Christmas Day, relating to the business of the Association. When he retired from the Pharmaceutical Council his colleagues in Bristol presented him with an illuminated address. Mr. Schacht was a warm supporter of Bristol University College, being a member of the Council for some years and Treasurer at the time of his death. He was one of the early members of the Bristol Rifle Corps, and was at one time known as a crack shot. He was a man of striking appearance, spare in build, and military-looking. He had a cultured mind, a most pleasant smile, and in conversation was fascinating. Perhaps, after all is said, the most remarkable thing about Mr. Schacht was the keen interest which he took in scientific progress. Although it is more than fifty years since he put aside his text-books, he remained a student to the end, keeping well abreast of the advances in

chemistry, so far as mastery of the principles is concerned. Mr. Schacht leaves a widow and three children—two daughters and a son, who is a medical practitioner in London. The funeral took place on Wednesday afternoon, the body being conveyed by road to Portbury, some six miles from Clifton, and buried in the little churchyard there. The Vicar, the Rev. M. C. Proby, conducted the service. The attendance was large, the mourners including present the Misses Schacht, Dr. Mark Schacht, Mr. F. Holt; Messrs. C. Ekin, R. W. Giles, Walter Hills, M. Carteghe, and A. L. Savory (representing the Pharmaceutical Society), Messrs. B. Allen, J. Stroud, B. Keen, and J. W. White, of the Bristol Pharmaceutical Association. From Bristol University College there were present Professors Lloyd, Morgan, and Rowley, and Mr. J. Rafter, secretary. Amongst others who gathered around the graveside were Messrs. C. Townsend, W. Pitman, G. W. Isaac, T. Brendon, and J. T. Long.

SPOUNCER.—On December 21, at Northolme, Mrs. Spouncer, widow of Mr. Thos. Spouncer, wholesale druggist, Gainsborough. Mrs. Spouncer, who was advanced in age, dropped down dead.

Business Changes.

Notices of changes in the retail trade, and opening of new businesses, are inserted in this section, free of charge, if properly authenticated.

MR. D. I. WILLIAMS, chemist and druggist, has recently opened the Medical Hall, Llanwrtyd Wells, Breconshire.

MESSRS. PRASCHKAUER & CO. (LIMITED) have removed from 109 Fenchurch Street, to 112 Fenchurch Street, E.C.

MR. WILLIAM PAINE, late of Westbury-on-Trym, Bristol, has purchased the business carried on by Messrs. Potter & Jessop at Sudbury, Suffolk.

MR. JOHN G. SUTHERLAND, chemist and druggist, has opened a handsomely appointed pharmacy at 252 Gorgie Road, Edinburgh.

MESSRS. CORBYN, STACEY & CO. have disposed of their dispensing and retail business at 51 High Holborn to their manager, Mr. Curtis.

THE Scottish Drug Depôt (Limited), Nicholson Street, Edinburgh, will shortly open a branch establishment in Dalkeith.

MESSRS. GABLIN ET CIE., who have the Paris depôt for the "Pilules Pink pour Personnes Pâles du Dr. Williams," have removed from Rue le Peletier to 3 Cité-Trevisé.

MESSRS. ROBINSON & SONS (LIMITED), of Chesterfield, have purchased the Walton Works, at present occupied by Messrs. Hewitt, Bunting & Co. (Limited), to give facilities for the further extension of their business.

MR. J. JENKINS, chemist, 156 Portland Road, South Norwood, has entirely re-built and modernised his premises. By enlarging the premises at the back, he has been enabled to exactly double the size of the shop, the front of which is new.

SEDWAY'S TROVATOLO (LIMITED) announce that their business will in future be carried on at 23 St. Mary Axe, E.C., and they have appointed Messrs. Bryce & Co., of 23 St. Mary Axe, E.C., their sole agents for the United Kingdom and abroad.

MR. A. M. SHEPHERD, Rose Street, Aberdeen, has sold his business to Mr. Wm. F. Hay, of Duncan, Flockhart & Co., Edinburgh. We understand that Mr. Shepherd has been compelled to take this step owing to the state of his health, which obliges him to take a prolonged rest.

MR. W. JAMESON, 92 Newington Butts, S.E., asks those who sell his arsenical soap to apply to him for a stock of the following label:—

This soap is labelled "Poison" as required by Act of Parliament, but is guaranteed quite harmless. Amongst other ingredients arsenic is introduced in its manufacture, but no specific quantity is guaranteed.

Personalities.

PROFESSOR J. MILLER THOMSON, of King's College, the Senior Secretary of the Chemical Society, has been appointed an examiner in chemistry to Victoria University.

MR. LEONARD ARTHUR PARRY, M.B., B.S., eldest son of the principal of Messrs. Bartlett Hooper and Co., has passed the M.D. Examination of the London University.

MR. C. F. SYMES, son of Dr. Charles Symes, of Symes & Co. (Limited), 14 Hardman Street, Liverpool, is about to return to Australia, and is open to undertake commissions if sufficient inducement offers.

MRS. GARRETT ANDERSON, M.D., has just been elected President of the East Anglian Branch of the British Medical Association. She is the first woman to be elected President of a branch of the Association.

At the election to the Commercial Travellers' School, on December 28, Elsie Eveline Hedley, daughter of the late Thomas Hedley, formerly traveller to Walker, Troke & Co., was returned at the head of the poll.

MR. H. BASKERVILLE MASON has been sent on a foreign trip in the exclusive interests of the Sanitas Company (Limited), (disinfectant manufacturers), and left England on Boxing-day. He will probably be absent for a year or more.

Trade Notes.

THE proprietors of Dr. Tibble's Vi-Cocoa announce anti-cutting terms, giving 15 to 20 per cent. assured profit to retailers of this article.

"MAXPOLE" has been registered as a U.S. trade-mark for dyes and laundry preparations by the Maypole Soap Syndicate (Limited), High Holborn, W.C.

MESSRS. J. BOSISTO & CO. of Richmond, Vic., have registered their well-known parrot brand in the United States as a trade-mark for "oil of eucalyptus or rheumatic oil."

MESSRS. POTTER & CLARKE, of Artillery Lane, publish with the January issue of their quarterly bulletin (which is a cheerful little sheet) a lithographed supplement, giving portraits of the members of their firm, as a New Year's card.

SIR HENRY E. ROSCOE, F.R.S., D.C.L., has accepted the post of English adviser of the Scientific Department of Liebig's Extract of Meat Company (Limited)—a further guarantee of the excellence of the preparations of this old-established company.

NAUHEIM TREATMENT.—Mr. M. Buchner, 149 Houndsditch, E.C., writing in regard to our remarks on December 19 respecting the Nauheim treatment and the manufacture of cakes of alkali bisulphate for the same, states that Dr. E. Sandow, of Hamburg (for whom he is agent), manufactures such cakes under an English patent (No. 16,422), so that no other manufacturer can produce the same article without liability of infringing Dr. Sandow's patent.

THE Maypole Company (Limited) inform us that the following awards were made for Maypole soap at the exhibitions in 1896:—India and Ceylon Exhibition, London, bronze medal and diploma; Great Yarmouth Exhibition, gold medal; Midland-borough Grand Trades and Arts Exhibition, diploma; East London Trade Industries and Arts Exhibition, diploma. Maypole Soap, it is added, is entirely of English manufacture, and everything connected with it, even to the management, is English.

In a Trade Note of last week we stated, speaking of Messrs. May & Baker's cyanide of potassium, that that firm had lately taken over the business of Messrs. Johnson & Sons, Finsbury. What we meant to say was that May & Baker (Limited) had taken over Messrs. Johnson's cyanide-of-potassium department. The other part of the concern remains in the possession of Messrs. Johnson & Sons, manufacturing chemists (Limited), of 23 Cross Street, Finsbury, E.C., and we regret that a slip of the pen on our part should have given a meaning to our statement which was incorrect and not intended.

MESSRS. G. B. KENT & SONS send us a new wholesale price-list, fully illustrated, of their painting-brushes, which should be useful to some chemists. We are informed that the firm have recently purchased the commanding block of freehold premises known as 75 Farringdon Road, E.C., and that they will move their show-rooms and stock from Great Marlborough Street to that address as soon as the necessary alterations are completed, which they anticipate will be about April next. They have also recently enlarged their factory at Victoria Park. The firm have occupied the Great Marlborough Street house for eighty-nine years.

FILTER-BUSINESS IN 1896.—The Mawson Filter Company, Newcastle-on-Tyne, inform us that the year just closed has been of unusual interest to the filter-business. In 1895 most of the makers found a falling-off in the demand at home, chiefly in consequence of a report then published that only the earthenware or clay candle filters would prevent the passage of bacteria, and, therefore, that that kind should alone be used. While this statement ignored the fact that such filters had no effect on the colour, taste, or smell of water, it led, to a certain extent, to the use of charcoal filters being discontinued, and demand was reduced proportionately. Since then the true facts of the matter have been better appreciated, and confidence in the filters which have long held the market has been restored, the result being that the year's trading has been rather remarkable, for whilst the home requirements have not increased, the number of filters sent to the Continent has been more than double the number of any previous year—a rather significant fact.

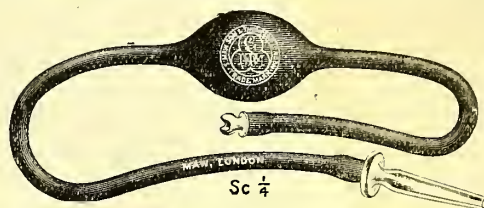
We have seen an advance-copy of the "Special Nett List, 1897," to be issued shortly by Messrs. May, Roberts & Co., druggists' sundriesmen, Clerkenwell Road, E.C. It is bigger than before, because there is a large number of new items and new illustrations in it, and (sad to say) the firm appear to have extended their advertising *clientèle*, which is such a wicked thing to do that our protest would be crushing were we not also sinners. So we give congratulations instead, in the belief that the extension referred to is a proof of the popularity of the list. The style of arrangement in the list is the same as before. The first part (80 pages) deals with sundries and surgical appliances; the second (nearly 50 pages) includes patent medicines and proprietary articles. It is a decided advantage to have the prices "nett," but in regard to Part I., 5-per-cent. discount is given on orders above 1*l.*, and special cash quotations are furnished for 3 or 6 dozen of most articles in Part II. The list will be sent to any one who sends his business card to Messrs. May, Roberts & Co., and those who have started in business since the last one was issued should be the first to apply for it.

CALENDARS, ETC.—Messrs. Evans, Gadd & Co., Exeter, have published a pretty office calendar, which has upon it pictures of their offices, warehouses, and laboratory.—From Messrs. Smith, Stanistreet & Co., pharmaceutical chemists, Calcutta, we have received a souvenir calendar, the front of which is a composite photograph containing views of the firm's pharmacies and portraits of their staffs.—One of the 20,000 copies comprising the fourth edition of Cullwick's Medical Dictionary and price-list has come to us. Mr. H. E. Cullwick, 42 Dudley Street, Wolverhampton, is the compiler, and he has managed to make the dictionary interesting and instructive, as well as enterprising.—Messrs. Oxen & Co. (Limited), chemist, Newcastle-under-Lyme, issue a sixpenny Christmas Annual, containing stories by John Strange Winter, Jerome K. Jerome, and other eminent writers. It is well illustrated.—One of the prettiest calendars we have seen this year is presented by Messrs. Parke, Davis & Co., 21 North Audley Street, Grosvenor Square, W. The attractive feature about it is a steel engraving of a cat playing the part of an invalid, with bottles and ext. cascara sag. fl. and euthymol beside it, as well as capsules, and a medicine tumbler—"And yet—they call this fun," poor pussy is supposed to say.—In the Welshpool and district almanack published by Mr. H. Payne, chemist, Welshpool, there is a good description of the town, and other useful local and agricultural information. A section entitled "Science for the Fireside" is particularly good.

Novelties.

SEAMLESS ENEMAS.

We referred last week to a new and cheap seamless enema which Messrs. S. Maw, Son & Thompson have added to their



stock. We now give an engraving of it. The enema is made of black rubber, and is of good quality.

COMPOUND PHENACETIN TABLOIDS.

The investigations of the Therapeutics Committee of the British Medical Association conclusively proved that phenacetin is one of the safest anti-neuralgics, and experienced physicians find that in small doses it succeeds as an antipyretic when other things fail, or are inadmissible. But even small doses sometimes depress the heart greatly in fevers, hence the introduction by Messrs. Burroughs, Wellcome & Co. of a compound phenacetin tabloid containing 4 gr. of phenacetin and 1 gr. of caffeine is appropriate. The caffeine will give that stimulus to the heart's action which is so necessary in fevers, and will be a material aid to the phenacetin in relieving cases of neuralgia and sick headache. The tabloids are supplied in bottles of 25 and 100.

SOLUBLE ANTISEPTIC PELLETS.

The Sanitas Company (Limited), Bethnal Green, E., have for some time been supplying compressed pellets of corrosive sublimate for making the L.G.B. disinfecting-solution, and they are now offering these in smaller quantities, for retail—viz., in tubes of eight pellets to sell at 4*d.* A pellet dissolved in 10 oz. of water makes a 1-in-1,000 solution of corrosive sublimate. The company also supply in the same form 5-gr. pellets of potassium permanganate, and 2-gr. pellets of carbolic acid. The latter we would suggest are rather weak, for when one is dissolved in $\frac{1}{2}$ -pint of water the solution is only 1 in about 2,200, and this can scarcely be called a "powerful disinfecting-solution."

NO JOKING ALLOWED.—An apotheker at Stommeln, in Rhenish Prussia, has been fined 10*s.* and costs by the Court at Cologne because he had made fun of what seemed to him a badly-written prescription from a local medical practitioner.

COMBATING THE LOCUST-PLAGUE.—At the request of Mr. Arnold W. Cooper, of Natal, the Government of that colony have ordered from England by telegraph a supply of tubes and culture-dishes to enable Mr. Cooper to conduct upon a large scale his experiments for destroying locusts by inoculating them with a fungus. Mr. Cooper reports that he has recently supplied tubes of his fungus to the authorities of Ndwedwe and Krantzdrorp, and that the application appears to have been fairly successful. He also states that in his own laboratory he has conducted experiments with varying results. About 60 to 70 per cent. of the locusts experimented upon died from the disease; the remainder from various causes. Some specimens exhibited a profuse growth of bacteria and symptoms of general intestinal inflammation. The young locusts will be hatched about the beginning of the new year, and Mr. Cooper hopes with the new apparatus from England to be able to cultivate the fungus so as to infect the ground where the eggs have been laid.

Legal Reports.

THE PHARMACY ACT.

At the Bournemouth County Court, on December 18, before his Honour Judge Philbrick, Q.C., Mr. Marston, the managing director of Messrs. Marston & Co. (Limited), chemists, of the Holdenhurst Road, Bournemouth, was sued by the Pharmaceutical Society of Great Britain to recover a penalty of 5*l.* for selling on October 29 a bottle of "Dr. Collis Browne's Chlorodyne." Mr. Burt, who appeared for the defendant, said the selling of the drug took place between the time that a fully-qualified assistant left and another took his place. His Honour gave judgment for the plaintiffs for the amount claimed.

REVENUE LAWS.

EXCISE LICENCES.

NATHAN GEORGE BECK, chemist, Burgess Hill, was summoned by the police on December 28, before the Haywards Heath Magistrates, for selling intoxicating liquors without a licence. The daughter of the police-sergeant who prosecuted proved the purchase of a bottle of gin from defendant on December 15. Mr. Gosnell, solicitor to the Off-licences Association of London, who defended, said defendant's authority was under the direct sanction of the Excise, and was outside the 1872 Act. Under those Excise laws the Commissioners were enabled to grant in certain cases where a certificate is signed by two Magistrates licences to sell by retail until the next Brewster Sessions. He had the authority of the Excise for that statement, and that was the position the defendant was in. The licence held by the defendant was only granted by the Excise in exceptional cases, and came through the Assistant Secretary. Burgess Hill had the distinction of having first raised the question between police and Excise. He had the Commissioner's authority, but the Justices' authority was with the Excise.

It was decided to adjourn the case until January 25.

SELLING METHYLATED-SPIRIT FOR WHISKY.

At Darwen Police Court, on December 24, Thomas Parkinson, belonging to Blackburn, was prosecuted by the Crown for selling methylated spirit without a licence. The prisoner was alleged to have sold a quantity of methylated spirit as whisky to householders at 1*s.* a pint, and in one case a woman who drank the stuff was ill for three days afterwards. The prisoner was remanded, and bail was opposed, it being stated that the penalties would amount to 700*l.*

SALE OF FOOD AND DRUGS ACT.

SPIRIT. ÆTH. NIT.

At the Sittingbourne Petty Sessions, on December 21, Raymond Robinson, chemist, of Sittingbourne, was summoned for having sold spirit of nitrous ether which was below the legal limit of strength. For the defence, Mr. Robinson showed that notwithstanding every precaution that had been taken, the spirit was constantly undergoing a process of reduction by evaporation. The Bench dismissed the summons.

TINCTURE OF IODINE.

CLARA WEST, chemist, Keighley, was summoned at Keighley, on December 22, for selling tincture of iodine not in accordance with the British Pharmacopœia. The analyst (Mr. Allen) certified that the tincture bought from her manager on November 4 contained the following proportions to the Imperial pint:—Iodine, 243.4 gr.; iodide of potassium, 367.5 gr.; rectified spirit, 749.0 gr.; and water, 647.5 gr. The proper proportions should have been 218½ gr. each of iodine and iodide of potassium in 1 pint of rectified spirit. Mr. Naylor, who defended, said it was impossible to have rectified spirit without water, and that the variation from the Pharmacopœia as regarded iodine was insignificant. As to iodide of potassium, that was perfectly harmless, and used simply as a solvent. He characterised the case as trivial to the last degree, and asked the

Magistrates to dismiss it on payment of costs. The Magistrates adopted Mr. Naylor's suggestion. The costs amounted to 1*l.* 6*s.* 3*d.*

LIQUORICE.

At Salisbury, on December 22, Wm. Axton, grocer, was charged with selling liquorice-sticks which the public analyst certified were constituted as follows:—Liquorice, 10 per cent.; starch, 33 per cent.; water, 4.4 per cent.; gelatine and colouring, 52.6 per cent.

For the defence, Mr. Jackson contended that no person wanting liquorice as a medicament would go to a grocer's or confectioner's for it. He contended that in this case the liquorice-sticks were not sold as a drug.

The Bench took this view, and refused to state a case. They allowed defendant 1*l.* 16*s.* 4*d.* costs. They also said that they refused to state a case on the ground that "liquorice-stick" was not a drug.

ARSENICAL SOAP.

At Wimbledon, on December 23, Henry Lansdale Carter, 50 The Broadway, was summoned for selling as "arsenical soap" an article which contained no arsenic. Mr. C. J. Martin, County Inspector, prosecuted, and Mr. Crimp appeared for the defendant. Mr. Martin argued that arsenical soap was a drug, it being advertised to cure pimples, freckles, and other ailments of the skin. The Chairman said if a drug were asked for and a soap given that contained no arsenic, it would be no drug. Therefore, how could Mr. Martin bring his case under the section of the Act which applied to medicines or drugs? Mr. Martin then gave evidence and proved the purchase of a cake of arsenical soap at defendant's shop, for which he paid 6*l.* Dr. Stevenson gave evidence in support of his certificate that there was no arsenic in the soap. Defendant stated that since he was served with a notice he had sold no more of this particular soap, and at the request of the manufacturers had returned it to them. Mr. Crimp argued that if the soap contained no arsenic it was not a drug. The Chairman said this was not one of the ordinary cases of adulteration. It was one in which a considerable profit was made, no doubt, but this was nothing to do with it. There was no suggestion upon the honesty of the defendant. Mr. Martin concurred, adding that it was simply a test-case. The Chairman: Quite so. The case is proved to the Magistrates' satisfaction that this article contains no arsenic whatever. Undoubtedly "arsenical soap" intends people to believe the soap does contain arsenic. As this contains none, it is not a drug, and we come to the conclusion that therefore no offence has been committed under this section. We believe defendant was deceived, but the remedy for this does not lie under this section. The case is, therefore, dismissed.

EMPLOYERS' LIABILITY.

At Leeds County Court, before Judge Greenhow, on December 22, Edward Kearns, labourer, sued Messrs. Wesley, North & Co., of the Victoria Chemical-works, Hunslet, to recover 136*l.*, damages for personal injuries. The plaintiff had been in the employ of the company for about two years as a general labourer, at a wage of 17*s.* 6*d.* per week. The defendant made charcoal, the wood being carbonised and distilled in retorts. The gas was allowed to accumulate in tubs partly filled with water and covered with loose covers. To prevent the escape of this gas the crevices in the tubs had to be covered with fireclay or other plastic material. On April 15 the plaintiff said he was told by the foreman to fire the retorts. After firing he proceeded to plaster one of the tubs and was immediately surrounded by gas, and for some time blinded. He said he ought to have been instructed to shut off the gas by means of a valve before doing the plastering, and the absence of such instruction constituted the alleged negligence. He had been an in and out patient at the infirmary for several weeks, and for some time afterwards had to be led about by his wife, who gave up a remunerative occupation. For the defence it was alleged that the accident was caused by the plaintiff's own negligence. Witnesses stated that the plaintiff had been engaged for six weeks in firing the retorts and in looking after the tubs. The foreman

said he warned him about the object of the valve. The Judge came to the conclusion that the plaintiff was not properly warned as to the necessity of turning off the valve, and therefore gave the verdict in his favour of 35%.

Bankruptcies and Failures.

FREDERICK WILLIAM KENRICK, Horncastle, Chemist and Druggist.

A STATEMENT of affairs herein has been issued by the Official Receiver of the Lincoln Bankruptcy Court. The liabilities are returned at 220% 11s., and the assets are estimated to realise 2% 5s. The only assets are the book-debts. Debtor attributes his failure to "loss of his goods at Horncastle, being destroyed by fire in 1895."

Re WILLIAM EDMUND SCHOFIELD, 1 York Street, Heywood, Wine-merchant and Drug-dealer.

A FIRST meeting under this bankruptcy was held at the offices of the Official Receiver in Bankruptcy, Bolton, on December 23. Resolutions were passed appointing Mr. J. Townley Trotter, chartered accountant, 27 Brazenose Street, Manchester, as trustee, with a committee of inspection.

Re JOHN LEETE, 29 Meanwood Road, Leeds, Chemist.

A DIVIDEND of 4½% in the pound has been declared and distributed in this matter by the trustee, Mr. R. Gaudin, The British Traders' Mercantile Agency, 20 Bond Street, Leeds.

Re A. E. POWELL & Co., late of Manor House, now of Kings-hill House, Swindon, Wilts, Manufacturers of "Moonseed Bitters."

MR. H. BEVIE, Official Receiver of the Swindon district has this week issued to the creditors in this case a statement showing the position of the estate, and intimating his intention to apply to the Board of Trade for his release from the position of trustee of the estate. The receiving order was made on a creditor's petition on April 20, 1891, when the debtors estimated their assets at 1,015% 12s 10d., including book debts, 465%, which, however, only realised 68%; furniture 400%, which in realisation fell 19% below, and stock-in-trade 150%, which realised 273%. From the 734% 13s. realised 272% 11s. 7d. was paid to redeem securities, leaving the net realisations 462% 1s. 5d. The total expenditure reached 289% 19s. 11d. This permitted of the payment of 60% of rent and 169% 4s. 8d. to eleven preferential creditors, leaving a balance of 2% 16s. 10d. Nothing was paid to the unsecured creditors. The debtors' estimate of the amount expected to rank for dividend was 7,679 % 10d. The Official Receiver remarks: "This estate has been kept open since 1891 in order to dispose of the stock of 'Moonseed Bitters.' This has now been done, and the preferential creditors have been paid 19s. 6d. in the pound upon their claims. The estate only came into my hands in January, 1896, at which time there was in stock a large quantity of 'Moonseed Bitters,' which, however, I have succeeded in disposing of."

Gazette.

PARTNERSHIPS DISSOLVED.

Godfrey, F., and Barker, C., under the style of Godfrey & Barker, Glendower House, Compton Terrace, Islington, N., surgeons and general medical practitioners.

Guest, R., and Rigby, J. S., under the style of Guest & Rigby, Liverpool, chemical manufacturers and dealers in malt, hops, and sugar.

Jessop, J. A., and Potter, H. M., under the style of Potter & Jessop, Sulbury, chemists and druggists.

Lowe, T., and Wrench, F. W., under the style of the Silverdale Aërated Water Company, Silverdale, Staffordshire, aërated-water manufacturers and bottlers.

Roberts, H., and Watts, H. J. M., under the style of Roberts & Watts, Tonbridge, surgeons, apothecaries, and accoucheurs.

Deeds of Arrangement.

Gray, Edward, 2 Gloucester Road, Regent's Park, London, registered medical practitioner. Trustee, Samuel J. W. Smith, 3 New Inn, Strand, London, solicitor. Dated, December 18; filed, December 24. Liabilities unsecured, 1,722% 6s. 10d.; estimated net assets, 1,050%. The following are scheduled as creditors:—

	£	s.	d.
Bangs, J. & H., London	59	0	0
Chalk Farm Granary, London	13	0	0
Dakin Brothers, London	68	0	0
Gardner, Samuel & Co., London	48	0	0
Lewis & Co., London	180	0	0
Maple & Co., London	21	0	0
Meyer & Miltger, London	15	0	0
Mutual Loan Fund Association, London	44	0	0
Pringle, R. B., Guildford	100	0	0
Riddell, —, Beckenham	300	0	0
Robertson, D., Glasgow	100	0	0
Roberts, W., London	100	0	0
Rylands & Co., Birmingham	240	0	0
St. Pancras Vestry, London	22	0	0
Stephen, Dr., London	20	0	0
Stone, C. G., London	200	0	0
Webb & Co., London	13	0	0
Whitlock, Henry (Limited), London	51	0	0
Wilton, —, London	55	0	0

Jones, David, Apothecaries' Hall, Bangor Street, and residing at 15 High Street, Carnarvon, chemist and druggist. Trustee, William Jones, 15 High Street, Carnarvon, bookkeeper. Dated, December 12; filed, December 19. Liabilities unsecured, 809% 7s. 9d.; estimated net assets, 410%. The following are scheduled as creditors:—

	£	s.	d.
Apothecaries' Hall of Ireland, Dublin	20	0	0
Ayrton & Saunders, Liverpool	59	0	0
Carnarvon Corporation (rent)	15	0	0
Clay, Dod & Co., Liverpool	77	0	0
Ellis, R. & Son, Ruthin	59	0	0
Evans, Sons & Co., Liverpool	63	0	0
Griffith, Mrs., Carnarvon	40	0	0
Jones, William, Carnarvon	63	0	0
Morgan, J. Rhys, Birmingham	13	0	0
Rylands, J. W., Birmingham	20	0	0
Sumner, R. & Co., Liverpool	32	0	0
Thomas, John, & Sons, Carnarvon	50	0	0
Williams, David, Carnarvon	15	0	0
Williams, Mrs., Carnarvon	23	0	0
Wyles (Limited), Coventry	29	0	0
York Glass Company (Limited), York	18	0	0
Banker's Claims	85	0	0

Tyldsley, Thomas, and Tyldsley, Arthur (trading as Thomas Tyldsley & Son, East Street Chemical-works and Stansfield Dye-works), Kirkstall Road, Leeds, manufacturing-chemists and dyers. Trustee, John F. Dyson, 51 Commercial Buildings, Park Row, Leeds, and at Huddersfield, chartered accountant. Dated December 19; filed December 23. Liabilities unsecured, 793% 13s. 11d.; estimated net assets, 558% 2s. 8d. The following are scheduled as creditors:—

	£	s.	d.
Ruch, Edmund, & Cie.	26	0	0
Cowburn, W. H., Manchester	11	0	0
Crossley, Thomas & Co., Leeds	86	0	0
Crowther, G. J., & Co., Woodhouse	10	0	0
Dixon, Chew & Co., Batley	23	0	0
Hollingworth Coal Company, Manchester	89	0	0
Leeds Dyeware Company, Leeds	80	0	0
Leeds Machinery Company, Leeds	14	0	0
Moyes, J. W., Leeds	135	0	0
Ogier, W. H., Leeds	12	0	0
Turner, Isaac, Armley	31	0	0
Wood & Belford, Leeds	17	0	0
Consolidated rate for, &c.	12	0	0
Rent	143	0	0

Wainhouse, Thomas, trading as "T. Wainhouse & Co." 451 Market Street, and 29 New Cannon Street, Manchester, and residing at East View, Rosebath Road, Urmston, near Manchester, chemical merchant. Trustees, Joseph H. Bayley, 3 Clarence Street, Manchester, and George G. Poppleton, 26 Corporation Street, Birmingham, chartered accountants. Dated December 22; filed December 24. Liabilities unsecured, 3,315% 9s. 11d.; estimated net assets, 2,584% 15s. 11d.

Röntgenography for Pharmacists.

III.

HOW TO TAKE A RADIOGRAPH.

IT is somewhat difficult to define radiography; but the simplest way of putting it is that it consists in fogging a sensitive plate by means of the x rays except in those parts where the film is protected from their influence in a greater or less degree by an object placed between the x rays and the sensitive surface. It is, in other words, an analogous action to that of ordinary light, in upsetting the "tottering equilibrium" of sensitive silver salts. There are several plates on the market which profess to be especially sensitive to the x rays, but most of the commercial plates and films sold for photographic purposes answer as well for radiography. It is nevertheless an advantage to use the most sensitive plate obtainable, as the action of the x rays on silver salts resembles light rays in this respect. The plate or film is wrapped in light-tight paper to shield it from ordinary light rays—placing the plate in a dark slide is not the best way, on account of the space which must be left between the plate and the object to be radiographed. Tylar's light-tight envelopes answer fairly well. Care must be taken not to injure the surface of the plate when placing in the envelope. If working at home there is no need to stick down the envelopes, or at least only the outer one. Beginners in radiography will find the greatest difficulty in getting at the correct exposure, and, as the object is frequently radiographed under great disadvantages it is not always convenient to make several exposures. We can find no definite data in any of the few text-books on the subject, which is hardly to be wondered at considering the few months only which have elapsed since good apparatus have been obtainable. Working with a fairly good focus pattern-tube the following conditions give good results when radiographing a hand—the picture showing not only the outlines of the bones, but also the "grain." Place the protected film on the table, and fix the focus-tube firmly 4 inches above, so that when the hand is in position there is a space of about 3 inches between it and the tube. An exposure of four minutes is now given, and if using 6 oz. of hydroquinone developer the image will appear in one minute and development be complete in five. At this time of the year the developer must be warmed to 60° F. As the time of exposure varies as the square of the distance, it is possible to estimate the exposure tolerably accurately. A fluorescent screen is of great use in computing the relative density of the limbs. An adult foot needs but little more exposure than a hand. A child's ribs radiographed through the body require from fifteen to twenty minutes. Before submitting a patient to the process care should be taken to place him in a comfortable position, so that he will not notice so much the length of the exposure. In radiographing a foot, place the apparatus on the floor, but in the case of the body the subject should be on a couch. As a rule surgical dressings and wooden splints may be disregarded, if the dressings do not contain lead-plaster, which is dense to the rays.

MESSRS. S. MAW, SON & THOMPSON.

The reference in the foregoing note to the grain of the bones is well illustrated in the appended reproduction of a radiograph of a hand taken by Dr. H. Trentham Maw, M.A., director of the surgical department of Messrs. S. Maw, Son & Thompson's business. In the original negative the grain of the bones is perfectly clear, although some of the detail is lost in the engraving process. The illustration is of interest also in respect to the fact that it shows exactly what a radiographic negative is like; the prints which we have hitherto given are positives. The present illustration will make clear to those who have not studied Radiography how the x rays act upon the sensitive plate. All the lighter parts are those of the hand which the rays did not penetrate, consequently did not reach the plate in sufficient amount to affect decomposition of the silver salt of the film, while the more abundant rays penetrating the softer or fleshy parts were energetically reducing the salt.

Messrs. S. Maw, Son & Thompson were one of the first firms which we called upon in regard to this subject. They

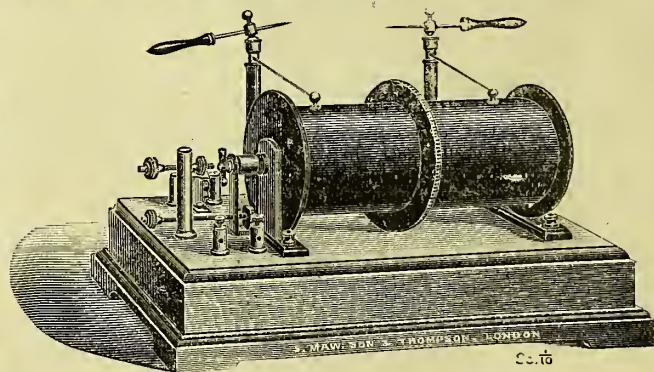
have been supplying apparatus to chemists, and have fitted up in their offices in Aldersgate Street a complete



FIG. 3.—Reproduction of a negative radiograph of the hand by Mr. H. Trentham Maw, M.A., M.D. Cantab.

installation for the convenience of their medical and pharmaceutical friends. They use the current from their own electric motor, with a resistance frame to equalise it before switching through the coil.

During the past month the firm have made considerable advance in their work on the subject, especially in determining the value of the various vacuum tubes in the market,



and it is gratifying to find that those made in Germany are inferior to English-made tubes, which only they stock. The above illustration shows the form of the coil which they recommend. This they supply in strengths sufficient for 4-inch, 5-inch and 6-inch sparks, at prices ranging from 12s. to 17l. 10s. The firm have in the press an illustrated pamphlet on radiography, with special reference to its use in surgical cases, and copies of this may be obtained on application.

A Drug-store Man's Experience.

[The writer of the following article claims to have had a very exceptional experience, extending over a quarter of a century, in establishment and conduct of drug-stores. We do not necessarily endorse all his views because we print them.—Ed. C. & D.]

IT was patent medicines which produced drug-stores, and chemists could have prevented the stores from coming into existence had they been generally as shrewd and far-sighted as the grocers and drapers proved themselves to be. These trades saw the value of patents as a "draw" for their other departments. Had the chemists only seen that the "draw" could be made to operate equally in the other direction—namely, to retain custom for their other departments—the public would never have deserted them in favour of drapers and grocers. The small extent of the patents-trade twenty years ago, as compared with the present day, would have enabled the prices of proprietary articles to have been reduced, with a loss to each individual chemist of only a trifling amount of his profits, and would have enabled him to retain his drug-business with undiminished prices, because at first it was only patents that were touched by the outside traders. Had chemists lightened the ship by throwing overboard the comparatively worthless cargo of patents' profits, the loss would have been slight, and many a chemist would still have been sailing on prosperously who has, by shrinking from the sacrifice, lost his all in disastrous shipwreck.

If the public believe they can buy as cheaply at a qualified chemist's as at a store they will give the

PREFERENCE TO THE CHEMIST.

And the public judge of prices generally by the prices of patents and of a few drugs and preparations, such as cod-liver oil, glycerine, Parrish's food, &c. They are quite ignorant of the value of the vast majority of medicines. The inference is obvious. Chemists who mean to compete with the stores must do so with their own weapons. It is essential to cut the price of patents down to that of the lowest store. But it is a great mistake to suppose that any store sells cheaply all round. They get a handsome profit on most things, patents excepted. One large store in London, which is a fair sample of others, makes a gross profit all round of 4% on every 100% of sales, or 4d. out of every 10d taken.

There is a general impression that large companies have a great advantage over individual traders by buying largely. It is true that they do in many instances get lower terms, but the difference is practically lost in paying the rents of central warehouses, salaries, and carriage for distributing to their various shops. I have been able to buy just as cheaply, when account is taken of all these matters, for a single drug-store as when purchasing for six or more shops simultaneously. It is the knowledge of how and where to buy, more than the extent of the purchases, that is of primary importance.

No chemist should make the mistake of despising the enemy, but, rather, should pay visits to the hostile camp to inspect his methods. The regular qualified chemist, probably in business on his own account from an early age, has never, perhaps, had the opportunity of studying those business ways and wiles by which the stores have taken his customers and decimated his profits. He cannot play the game with a chance of winning unless he knows it as well as his opponent. It will certainly not be time wasted nowadays for every young chemist, before going into business for himself, to take a situation for a year in a good drug-store. He may be *au fait* with the science and art of his business, but in a good store he will learn something of the commerce of pharmacy.

To gather gear by every wile
That's justified by honour.

BUYING.

It is to be feared that chemists too often parade before customers the bogey of bad drugs sold at stores. Such an argument does not go far. The only chance of using it is when a customer complains of high prices. This

complaint proves that the customer had bought the same article at the stores and had found no fault with it. If the stores' article satisfied the customer, what more could the chemist's article do? and, therefore, how is the chemist to induce the customer to pay more for it? Besides, it is but rarely that stores sell "bad goods." The store-buyer's motto is, "Get good stuff; bad does not pay; but do not give fancy prices merely to get what a wholesale house calls 'Elect.' It is generally no better for practical purposes than the next lower-priced article." To this there are exceptions, but only a few. Then, also, the stores do not buy drugs from lists, except small quantities of rare articles. Quotations at net prices are obtained from two or more houses. They always have accounts with more than one drug house, or patent house, or sundries' house, and for all heavy lines they go to special direct sources, buying always from samples and quotations. Before giving "repeat" orders they make sure the market has not fallen; if in doubt they get fresh quotations, because there is undoubtedly a downward tendency in prices as time goes on, due to various causes, such as improved processes of manufacture, foreign competition, increased regular cultivation of drug-producing plants, &c. Naturally, the multiplication of accounts causes additional work, but it pays; and if buying for the country any number of packages can be sent to one house for enclosure, if judicious care is observed to avoid asking a house to enclose goods bought from its opponents. Every good store-buyer makes constant use of the "Directory" for lists of manufacturers and dealers, as well as of the advertisements in THE CHEMIST AND DRUGGIST and its DIARIES; but he always writes for quotations before buying. Another good habit of the store-buyer is to avoid travellers as far as possible, especially in London, where most travellers are "commission" men. It is nearly always easy to buy cheaper direct from the house by writing. In this way the purchaser and not the traveller gets the commission. It is surprising, too, what amounts can be saved by judicious purchases of printed matter, labels, bottles, paper, corks, and the like.

CONSIDERABLE SAVINGS CAN BE EFFECTED

in buying patents by dealing simultaneously with two of the cheapest houses, comparing their prices for each article, and making a marginal note against each in one of the lists indicating which of the two is the cheaper. When making up a patents' order refer to this marked list, and divide up the order accordingly between the two houses. As to the so-called net cash patent-lists, there is scarcely one of them from which it is not possible to arrange for 2½ to 5 per cent. discount, and practically about two months' credit instead of ore. By this means scarcely any capital is required by a cash retailer on account of patents' stock, which he ought to turn over once in two months, and so get his money for the goods before he has to pay for them.

Should there be time to keep it, a cost-price book for drugs and sundries is very useful, not only as a guide to prices for future ordering, but if date and quantity of each purchase be also entered up from invoices, it forms an important check on the honesty of employes. Any too sudden running-out of an article then leads to inquiry. In my own experience it has more than once led to the observation and consequent detection of employes who were using or selling quinine, cocaine, &c., on their own account.

Stores mostly decline to buy unknown and unadvertised new specialities, although offered on easy terms and much cheaper than the corresponding well-known article. It is usually in the windows of the smaller chemists that one sees these unsaleable lines, and it is just there that they ought not to be, if the chemist would only see the advantage of using his leisure and his skill in putting up as good an article himself, at the bare cost of the ingredients and labels, thus saving the profit charged to him on the bought put-up article. It is the busy store proprietor, if anyone, who ought to feel tempted to buy these ready-packed goods, when he finds it difficult to get the staff to keep ahead of the work. But he is the last man to yield to the temptation, knowing that his living depends upon the completeness of the variety of his own preparations which he keeps, shows, and pushes, not on filling his windows and counters with other people's goods.

To sum up, there is no secret of success in buying for drug-stores, but the buyer must bring to the work every bit

of shrewdness he possesses, together with constant assiduity in watching the markets and the lists, keeping always in mind, with reference to every article, that perhaps it could be bought for less elsewhere if he were to try, and never sitting down with the belief that rock-bottom prices had been reached.

SELLING AND SPECIALITIES.

These have already been referred to, but a few more words remain to be said. Prices naturally vary in drug-stores according to location and opposition, but patents are so universally cut to a fairly uniform level, and form so frequently the public criterion by which they judge whether a shop is "dear" or "cheap," that every drug-store fixes its prices at the bottom figures found in any other store lists, regardless of whether he makes a profit or not. But practically there is never a loss, for seldom or never does a store fix its price below cost, and any chemist paying more for an article than he finds in a retail-store catalogue may conclude that his buying is wrong.

Drugs and sundries are much more matters of discretion in fixing prices. Fancy rates for ordinary well-known articles cannot be charged with impunity, but good fair profits even on these are obtained if well bought. Take chemical-food, glycerine, and cod-liver oil, perhaps the three most popular liquid medicines. On each of these the lowest store-prices admit of *one-half* profit or thereabout. But it is for the vast multitude of less-known articles that better prices can be got, as also for sundries, and indefinite compound medicines, such as quinine-and-iron tonic, cough-mixture, liver-syrup, &c., for which there is no standard of value, and therefore no exact comparison. Many stores now adopt the plan of having two different labels for each medicine in general use, one indicating a specially select quality, and the other with the name of the article only, without mentioning quality. A considerably higher price is placed on the former, whilst the latter is sold at lowest opposition prices. The former is placed on the "commission" list, and sells better than the other, although, of course, both "qualities" are identical. A great deal depends on the salesman whether paying or profitless goods are sold. Most stores avoid very youthful-looking assistants. A mature, substantial-looking man can, if he knows his work, sell almost what he likes, always producing promptly the article asked for, and then mentioning in a few quiet words the name and price of a "better" article, but never pressing it if his remarks have failed to make the customer wish to have it in preference to that first asked for. Many times every day this plan succeeds. It is now usual to give a commission of 5 per cent. to assistants on the sale of all paying goods, which can be pushed against similar non-paying articles, and the result is astonishing. Every man's efforts are then as sincere and earnest as his master's. And it is very uncommon to find over-pressure employed towards the customer, because assistants soon see that such a course defeats their object. It is this pushing of paying specialities—not only medicines, but sundries—that makes the stores successful. But there must be a considerable patents' trade, otherwise there is no opportunity to push the sale of the firm's own goods; hence the displays of patents in store-windows—to bring in the customers. Most stores have wonderfully complete sets of put-up remedies, soaps, perfumes, &c., to recommend against other people's specialities, and every such article soon pays over and over again for the initial cost of labels and other printed matter. And why should not both stores and chemists do this? They cannot now get such a profit on advertised goods as would half pay the expense of handing them out, and they have as good a right to advertise their own preparations by word of mouth as the great advertisers have to do so in newspapers. It is not often that the public ask for advertised goods because they really want them in preference to all others, but because they have seen the name in a newspaper, and know no other remedy that suits their complaint. Chemists, therefore, serve their own and the public interest in supplying

A SUITABLE ARTICLE AT A LOWER PRICE

—of course with the full knowledge and consent of the customer.

There is no obligation on chemists, stores, or anyone to sell or stock a preparation merely because it is advertised.

Were it not advertised the public would go to the chemist for a "cough-mixture" or a "neuralgia-cure," and he would recommend what he thought best. Does the advertising of the big firms take away the chemist's right to recommend to a customer what he thinks best? Or must he sit silent, and sell only goods on which he can make no profit? That is what it would come to if the advertisers had their way, and they ought to be thankful that chemists and stores decline to follow a course that would simply lead to the closing of their shops. Were that to happen, how, then, about the distribution to the public of the advertised nostrums—a work which stores and chemists now perform almost gratuitously?

To conclude this section, the stores' plan in forming their selling rules is—sell all patents as cheap as the cheapest competitor; sell other articles only as cheap as you must in order to maintain a reputation for cheapness. Sell your own goods at every possible opportunity, and encourage your staff to do so by some tangible reward. Remember that to make and keep a reputation for cheapness it is not necessary that low prices should be anything like general throughout your stock. Above all, make quite sure that your specialities are quite as good as any possible competitors in the same class whether advertised or not, remembering that advertised remedies are of necessity fairly good, otherwise they would not continue to sell. It is not essential to give the public an article of the full intrinsic value of the money charged for it, but it is essential that it be fairly well adapted to the purpose it pretends to serve. It is beyond the scope of this article to quote formulae successfully used by the leading drug-stores. Back numbers of *THE CHEMIST AND DRUGGIST* and its *DIARIES* form an inexhaustible mine of such, and any chemist, by diligent search, thorough practical testing, and, sometimes, with the variations suggested by his own special requirements, may soon prepare a set of formulae equal to the best.

ADVERTISING, IN AND OUT OF THE SHOP.

The best means of advertising a drug-store is the store itself. Such shops have, perhaps unconsciously, united in making their appearance such as to be easily distinguished from an ordinary chemist's. It has been found useless for a chemist to label his shop "This is a Drug-Store," or to call himself a "store-chemist," without also making his shop, as a whole, look like a drug-store. "Assume a virtue if you have it not." It is difficult to define in words what constitutes the characteristic appearance. Perhaps the first essential is to produce an impression of substantiality, and of big stocks of the leading saleable goods; not single bottles or packets of each article, but good sized battalions of a limited number of kinds of things, not solely own specialities or drugs, but also lots of saleable patents, and each block priced. Frequent changes should be made, each time introducing different goods, until all the lines worth showing have had a turn. This rule is applied to both window and counter displays. The front shop is carefully arranged so as to have an appearance of ample stocks, bottles being quite full, and every case and visible shelf crammed with goods (or it may be dummies). Prominent large signs, powerful lamps, handsome lettered mirrors are all important, in the order named, as outside advertisements, the aim being to give the establishment an imposing appearance in the public eye. The stores also try to attract continued attention by making as many varieties as possible in the style and shape of window-displays. Novelty arrests attention, but a window always the same is passed by.

Of other advertising, the price-list is the most popular; handbills are thrown away unread, but a price-list is often kept. Some of the shrewdest store-managers, however, purposely make the list a brief one, containing only a few hundreds of leading lines, mostly patents and popular drugs. This leaves the store free to fix its prices for the vast majority of things, as high as circumstances admit, and without submitting such prices to the hostile eye and counter-cutting of opponents. Properly worked these lists cost next to nothing, a few good advertisements, easily obtained, paying nearly or quite the whole cost. Some printers undertake to procure the advertisements and supply the lists free, making their profit by the surplus obtained from advertisers over the cost of paper and printing.

Generally speaking, newspaper and hoarding advertising is of little use for drug-stores, except just when a shop is being

opened. Then a few advertisements judiciously placed with local papers may secure a favourable notice amongst the news. This is of value.

STAFF, MANUFACTURING AND PACKING.

Surprising though it may be at first thought, stores do not encourage dispensing in many cases. This is, no doubt, partly because good prices cannot now be got, from the fact that prescriptions are so often repeated at different shops, thus ranking with patents as standards to test the cheapness of a store. Then making-up and copying a prescription takes up, on an average, as much time as serving half-a-dozen customers, and yields perhaps only 3d. profit. On any half-dozen customers the profit would greatly exceed 3d., hence a dispenser's time is of less value than a counterman's, though his salary is usually higher. As regards dispensing, the stores simply say, "We take what comes and do it well, but do not push the department."

In a store where there is not sufficient dispensing for one chemist, it is usual to fill up his time in making specialities and supervising one or more lads or girls in bottling and labelling them, and it is found that the lads and girls get through far more of such work than as many chemists, especially if paid a premium of 6d. or 1s. per gross finished. Countermen, if similarly encouraged, may also fill up spare time in finishing (not bottling), but it will be found that without the commission they have very little leisure for such a purpose.

In conclusion, it may be said that drug-stores have made their success not by good luck, nor in most cases by their owners at first having large capital, but by their serving the public more cheaply and nearly as well as chemists. Let chemists follow their example, and much may yet be recovered for the legitimate trade. At present the store is a fact and a large one; let chemists treat it as such, and meet business skill with business skill combined with their superior scientific knowledge. The presence of a drug-store in the same street is doubtless as unpleasant to the chemist as the piece of sand in the shell of the oyster is to its superior and legitimate inhabitant. But the bivalve does not fret idly over the unwelcome intrusion; he rather sets his activities to work in a new direction, gradually covering his enemy with a calcareous coating until its sharp cutting angles are blunted and it is rendered powerless to do him harm. In the process of accomplishing this, his own muscles become so tough and strong that no one can eat him up, and in the end, instead of being ruined by his seeming misfortune, he is as well off as before, besides having performed the useful office of adding a pearl to the wealth of the world.

The Pharmacist in Operatic Drama.

AFTER the pharmacist in fiction comes the pharmacist in music. He does not, we are sorry to say, appear to greater advantage in the one part than in the other. The operatic pharmacist is a sort of chemical Rip Van Winkle, who has recently been resuscitated after a sleep of over 130 years. He is a creation of Joseph Haydn, at the time when that famous composer lived in the Hungarian castle of Eisenstadt as director of the private band of Prince Esterhazy. The Prince, who possessed a beautiful and richly-fitted private theatre, expressed the desire that Haydn, who was at the time (1762) a young man of thirty, should write a comic opera, a branch of art in which the composer had not then produced anything. Haydn agreed, and composed "Lo Speciale" (the Pharmacist, or more accurately "the Apothecary"). The work appears to have been moderately successful, and was repeatedly performed at the Prince's castle and in Vienna. Haydn, however, was not at his best as a composer of comic opera, and along with his other works of the same character "Lo Speciale" soon fell into oblivion. A short time ago, on the occasion of a musical and dramatic entertainment in Vienna, Robert Hirschfeld, the well-known Austrian musical critic, suggested to the Princess Metternich the revival of one of Haydn's almost forgotten operas, and in pursuance of that object he visited the castle of Eisenstadt and looked up Haydn's manuscript of "Lo Speciale," part of

which was unfortunately lost. Hence the opera in its revised garb has been condensed from three acts into one. In spite of the Italian form of the opera the music is said to be thoroughly German in character, and in parts characteristic of some of the best of Haydn's later work. The plot is exceedingly simple. Sempronio, an old pharmacist, and his young assistant, Mengone, are rival wooers of Sempronio's niece, Grilletta, who has a third admirer in the person of one Volpino. The rivalry leads to much quarrelling between the three suitors, Mengone finally carrying off the prize, while Sempronio is throughout made to appear as an old fool who is gulled in turn by all the other characters. The revival of "Lo Speciale" has been fairly successful.

Ayur-Vedic Cures.

IF some of the numerous gentlemen who contemplate bringing on a patent medicine as a rapid means of accumulating wealth are casting about for novel recipes we would suggest to them a course of Vedic studies. The "system of Ayur-veda science" (though we do not profess an intimate acquaintance with it ourselves) appears to contain some capital wrinkles for nostrums; besides which the person who acquires a knowledge of it will be able to season his conversation with references that will crown him with an aureole of profound learning. We are moved to these observations because of certain advertisements of patent medicines prepared according to this system which appear in the *Moslem Chronicle* and other Indian journals. An advertisement of one Mr. Kaviraj Bjaya Ratna Sen Kavizojan, of Calcutta, in particular contains hints that may prove valuable to a Western medicine-man. Mr. Kavizojan conducts

A storehouse for all sorts of genuine and best medicines, oils, ghrilas, &c., for all kinds of diseases of men, women, and children, prepared strictly in accordance with the system of Ayur-veda science.

It includes such remedies as the following:—

Kamdev Ghrila.—Is a powerful remedy in cases of mental debility and loss of the retentive faculty, caused by too much study or exercise of the brain. This is specially beneficial to students. *Ghrila* for one month, 4 rupees.

Sixteen rupees seems a cheap rate at which to remove obstacles against the birth of an heir. Yet at that low rate Ayur-vedic lore enables those who desire "offspring" to gratify their desires. This is how Mr. Kavizojan puts it:—

Lukshna Mula.—Imported from North China; very rare and beneficial for women whose issues are very short-lived or who bring forth dead offspring. 1 tola, 16 rupees.

Shiva Rasayana ought to command a large sale. It is "a marvellous cure for acute lunacy. If used in the earliest stages complete cure is caused in two or three days. Box, 4 rupees." Perhaps Professor Max Müller might be persuaded to edit a popular English edition of these remarkable curative agents. On the whole, though, we think we are better without it; we should be getting too healthy and optimistic. After all, is not the truer philosophy that of the British undertaker who advertised: "Why live miserably, if you can be comfortably buried for 30s.?"

WHAT A WHACKER!—"Oh, it was terrible!" she remarked at the soda fountain. "Just think, in the whole of Berlin there was not one place where you could get ice-cream soda! And in London there was only one, while in the rest of England there is positively no ice-cream soda whatever." "Beg pardon, lady," put in the man who was drawing the soda "but you can get all the ice-cream soda in Berlin you want." And he rattled off the names of a string of places in the German capital, with evident familiarity. "And there are 100 soda-fountains in London and at least 40 each in Liverpool and Manchester. I know, because I have worked in all those places, though it may not be easy for a stranger to find them." "I'm glad she got her call," said the young man who paid for the drinks. "She had been rubbing that when-I-was-in-Enrope racket into me rather too hard."

Scientific Notes.

Chemistry, Pharmacy, Botany, Materia Medica, &c. Original, Selected, and Translated.

CHEMICAL ANALYSIS OF SKUNK SECRETION.

T. B. ALDRICH has investigated the chemical composition and physical properties of the matter emitted by the skunk (*Mephitis mephitis*) when hunted or otherwise frightened. This matter is notoriously one of the most evil-smelling substances known. Mr. Aldrich, who took the matter directly from the sac which communicates with the anal glands of the animal, found it to be of a lower sp. gr than water. It was of a golden colour, and burned with a bright flame, with liberation of an irritating sulphurous-acid vapour. The matter was neutral to litmus-paper, and answered all the reactions for mercaptan and some of those for allyl-sulphide. By distillation it was split up into two well-defined liquids of almost equal quantity, one of these, distilling over between 100–130°, retained the acid odour and the reactions referred to, while the portion distilling over above 130° had a less pungent odour and only gave a few of the allyl-sulphide reactions, but did not respond to the well-known mercaptan reactions either with acetate of lead or with red precipitate. In addition to mercaptan and allyl-sulphide, it contained traces of butyl-mercaptan. The matter is a powerful irritant, and possesses æsthetic properties.

WHITE TEA.

The *Kew Bulletin* mentions that the white tea of Persia, which comes from Tonking, is composed of the undeveloped leaf-buds so thickly coated with fine hairs as to give them a silvery appearance. The leaves are derived from the Assam tea-plant (*Camellia theifera*, Griff.) found wild in some parts of Assam and Burma, but now largely cultivated in Burma, Tonking, &c. The tea is known on the London market, where it is rarely seen, as flowery Pekoe Congou.

LE BLANC AND AMMONIA ALKALI.

THE Missouri Commercial Laboratory finds that there is a heavy as well as a light Solvay alkali. So that the test described in our issue of September 18, p. 455, is not always right. The laboratory says the following:—

Dissolve 55 grammes in a little water, dilute to 500 c.c. and pour into a high narrow beaker. Let the beaker stand a few minutes; if the insoluble matter settles to the bottom so as to leave the liquid clear or transparent, the soda is a Leblanc soda. If, on the contrary, the insoluble matter does not settle in a few minutes but remains suspended in the liquid, for several hours giving it a milky appearance, the soda is a Solvay soda.

ASPHALT.

At a recent meeting of the New York Section of the Society of Chemical Industry Dr. H. Endemann read a paper on the methods of analysing asphalt which completely reverses previous knowledge of the constitution of that substance. The method which he proposes is to extract 5 grammes of the asphalt with chloroform for total bitumen, the residue being used for determining organic and mineral matter. The chloroform is evaporated in a small flask and the residue weighed after drying for half an hour at 120° C. This gives the sum of the petrolene and asphaltene. About 0.2 to 0.3 grammes of the residue, is then put into a porcelain basin and heated in a current of carbon dioxide for twelve hours, at a temperature of 250° C. To aid volatilisation, volatilisation of the petrolene the asphalt should be spread over as large a surface as possible. The residue is then weighed as asphaltene. It appears from Dr. Endemann's investigation that asphalt is mainly asphaltene, which is a solid body, and is softened by the petrolene in the same way as turpentine oil softens crude turpentine.

Vanilla-essence (artificial).—Peru balsam, 5j.; oil of orange 5ss.; essence of violet, 5iv.; Tonka bean, 3ij.; tincture of castor, 30 drops; rectified spirit, 5viij.; magnesia, 3iiss.; water, 5iv. Mix the balsam and oils with the spirit and magnesia, add the rest of the ingredients; allow to stand for a week, colour with caramel, and filter.

Medical Cleanings.

TREATMENT OF WARTS.

BRAULT states that if the mother-wart is destroyed the smaller warts will disappear. He mentions a case in which old warts and their satellites were situated on the left hand; on the right hand there were only small warts; the latter retrograded quickly, as also did the small warts on the other hand, after the removal of the mother-warts.

PAINLESS TOOTH-EXTRACTION.

THE following solution is better than one of plain cocaine for subcutaneous injection round teeth which are to be extracted:—

Cocaine hydrochlor.	..	..	..	gr. vj.
Morphine hydrochlor.	..	..	..	gr. ss.
Sodium chlorid	..	..	..	gr. viij.
Antipyrin.	..	..	..	3j.
Guaiaecol.	..	..	..	℥iij.
Aq. destillat.	..	..	..	5viij.

Solve.

The distilled water should be recently boiled. The dose of the solution is 5 to 10 minims.

NIGHT-SWEAT IN PHTHISIS.

IN certain cases of tuberculosis minute doses of pilocarpine (gr. $\frac{1}{10}$ to gr. $\frac{1}{30}$) seem to control the night-sweat without doing harm otherwise.—*Therap. Gazette.*

HUILE DE CADE COLLODION.

THE bad odour of huile de cade is one of the chief objections to its use. Gaucher says it is wonderfully covered by acetone, and recommends it to be compounded with acetone collodion—i.e., a collodion in which acetone is used as a solvent instead of spirituous ether.

WHOOPIING COUGH.

A WRITER in the *B.M.J.* says that in whooping-cough infection lasts for a considerable time after the whoop has ceased. Six weeks at least should be allowed to elapse before the child is permitted to associate with healthy children. An Italian authority states that good service in whooping-cough is done by painting the fauces with a 1-per-mille solution of mercuric chloride.

URIC-ACID DIATHESIS.

DR. ALEX. HAIG has informed the Medico-Chirurgical Society that the old notion regarding uric-acid diathesis is wrong. He finds that uric acid, swallowed by man, gets into the blood and eventually appears in the urine, grain for grain, in proportion to the quantity ingested. This is a fact of far-reaching importance, for if uric-acid disease is largely due, not to excessive formation of this substance, but to its introduction (previously considered impossible), it follows that as introduction can be completely controlled, so can the diseases due to the excess of uric acid in the blood and body. In practice this is found to be the case, for Dr. Haig has completely freed himself and others from the "diathesis" by proper regulation of the diet.

THE COUGH-MIXTURE.

A CORRESPONDENT of the *Medical Brief* makes some pertinent remarks about cough-mixtures. Every little while, he says, formulas appear in scientific medical journals for the persistent, the asthmatic, the emphysematous, the weak and fruitless, the irritative, and the common, every-day cough, every formula a shot-gun by virtue of its ingredients. If we but stop to consider the pathology of a cough, it will become apparent to the majority of physicians why such preparations should be abandoned for more rational treatment. A cough being a symptom, and not a disease, is nature's way of indicating that somewhere there exists more or less irritation, whether in the respiratory tract or in some of the other organs such as the stomach or intestines. It is like the bark of the faithful watch-dog warning us of danger threatening. To silence this bark would be folly; to silence the cough by drugging to almost the verge of insensibility is equally sensible.

Obtaining a Low Temperature.

By S. J. LEWIS, Ph. C.

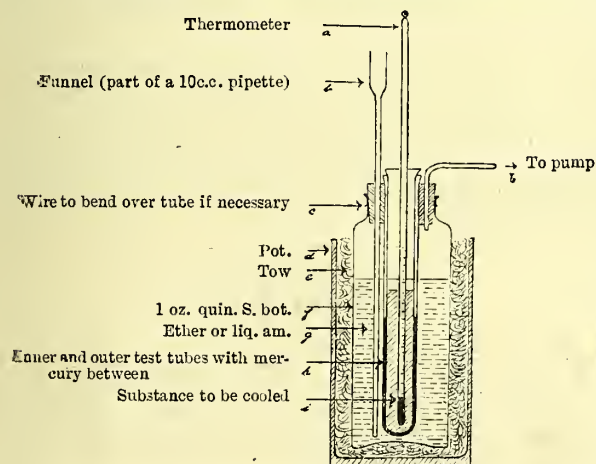
THE apparatus described by Mr. Sage in THE CHEMIST AND DRUGGIST of November 7 is very good. I have had one in use for about eighteen months with the most uniformly satisfactory results. I think, however, that Mr. Sage's design admits of some improvement, to describe which is the object of the present communication.

(i.) The freezing-bottle should be surrounded by a non-conductor of heat. The bottle which I use is a 1-oz. quinine, three-quarters filled with the liquid and placed in a 16-oz. open pot, the interspace being packed with tow.

(ii.) The cork should fit perfectly air tight. I have found a rubber one better.

(iii.) The inlet tube may be a suitable funnel so that more of the freezing liquid may, if necessary, be added from time to time during the operation.

(iv.) The test tube should be arranged as follows:—A strong test-tube, long enough to nearly touch the bottom of the bottle, should be fitted permanently through the cork



SKETCH OF FREEZING APPARATUS.

and a little mercury placed in it. The substance to be treated is put into a second test-tube which is then placed inside the first, the mercury thereby rising and so forming a conducting lining between the two tubes. It might be thought that such an arrangement would seriously impair the efficiency of the apparatus, but it does so to the extent of about 2°C. only; the extra convenience realised by using double tubes is very great. Should the inner tube float too high on the mercury it may be kept down by a twist of copper wire fitted round the neck of the bottle, a part of it being free to bend over the mouth of the tube.

(v.) The most convenient pump is an aspirating filter-pump worked by means of the water-supply; which, besides being cheap, has the advantages of continuous action and of requiring no attention.

It would be interesting to know more of Mr. Sage's experience regarding the economy of condensing the ether; it seems scarcely worth the trouble, for the loss is only about 1 oz. per hour without such precaution, and the quantity recovered would appear to be very small considering the current of air.

The efficiency of the various suitable liquids is indicated by the following temperatures attained:—

Temperature of laboratory	= 11° to 12° C.
The thermometer placed in the mercury in the outer tube,	
Ether meth. 720	-21° C. (-5° F.).
Liq. ammonia 880	-14° C. (+6° F.).
Petroleum ether	-10° C. (+14° F.).
Benzine	+2° C. (+35° F.).

A mixture of carbon bisulphide and ether did not prove so effective as ether alone, and was very objectionable otherwise than simply on account of its odour. The temperature

to which the substance in the inner tube is reduced is about 2° C. higher in each case.

For all ordinary purposes the liq. ammonia 880 is cheapest and most convenient. A temperature of -10° C. can usually be maintained for 1½ to 2 hours, when the liq. ammonia will have become considerably reduced in strength.

Either meth. 720 need only be used when a temperature well below -10° C. is required, or it is desired to maintain a low temperature for a considerable length of time.

The current of air should be continuous and fairly strong, and maintained during the whole time of the experiment.

Newington, S.E., November 12, 1896.

West Australian Sandalwood.

AN interesting report on the sandalwood of the West Australian forest areas (*Santalum cygnorum*), by Mr. J. Ednie-Brown, F.L.S., F.R.H.S., the Conservator of Forests for Western Australia, has recently been published. It appears that this tree, or shrub, is a somewhat important factor in the timber industry of Western Australia, and has materially assisted in building up the colony's export-trade in timber. The species is somewhat peculiar in appearance, and has more the character of a large bush than a tree proper. It has a low, depressed habit, and therefore very branching and heavily topped. It is seldom found more than 8 inches in diameter, and from 12 to 18 feet in height, with stems of from 8 feet to 10 feet in length, weighing from 3 to 6 cwt. Trees, however, have been cut yielding timber weighing more than half a ton. This tree is found well distributed over the inland part of the colony, except in the south-western portion. It grows most freely on barren, sandy soils, and is frequently intermixed with the wandoo (*Eucalyptus redunca*), red gum (*E. calophylla*), and moorle (*E. longicornis*). It is not gregarious. As far as can be found out, it appears that the first wood cut was delivered in Perth by the farmers of the eastern districts about fifty years ago, and was exchanged for goods with merchants trading at the port of Fremantle, and finally shipped to Singapore and China. Although the principal shipments took place from Fremantle and Albany, large quantities were exported from Bunbury, from which port the first shipment took place in 1849, the wood being brought to the port by Messrs. Elliott & Clifton. The farmers were paid about 7l. to 8l. per ton for the timber, the merchants only making 15s per ton profit. For the next twenty years the exportation of the wood languished, when it made a fresh start by the farmers sending their teams out in the summer time to cart the timber into port, which had been procured by parties of cutters during the previous season. In this latter enterprise Mr. George Rich, a well-known Bunbury man, was largely associated, and it was he who, with his men, cut the sandalwood track through the virgin forest of Jarrah (*Eucalyptus maripota*) to the Williams. Up to the present time about 20,000 tons of the wood have been shipped from the port of Bunbury. About 1882 the trade practically ceased, owing chiefly to a decline in price caused by the Chinese market being overstocked, the result of which was that the merchants were heavily encumbered with stock which did not improve on keeping. There is now a revival in the trade, and the old stocks along the Great Southern Railway are fast disappearing by way of the port of Albany, which is apparently destined to be the chief outlet in the future. The revival is very encouraging, in view of the fact that an experimental cultivation area for sandalwood has been set apart at Pingelly by the Bureau of Agriculture. Our correspondent, who had a talk with Mr. Ednie-Brown on the subject, tells us that experiments at the Pingelly experimental station were initiated on the Indian wood, but hitherto have proved unsuccessful. Mr. Ednie-Brown, however, regarded this as being due to the fact of the seeds being bad ones. What the reason of the experiments in this direction is is not quite clear, as the differences between the Indian and Australian oils do not appear to be quite understood or appreciated by a number of people in the colony. The distillery which was started at Torbay Junction, or "Ten Miles Great Southern Railway," some years ago is still standing idle, and piles of the wood may be seen going to ruin there.

I Modern Pharmacy.

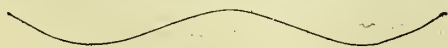
WE had written "a model pharmacy," but on second thoughts "modern" appears to us to be the more appropriate term for the pharmacy which Mr. T. J. Wallas, chemist and druggist, has recently opened at 491 Oxford Street, W.

We had seen one of Mr. Wallas's circulars to medical men, telling them that if they wanted sputa, &c., examined microscopically, urine analysed, water reported upon chemically or bacteriologically, he would be happy to do it for them at moderate rates, as he has both experience and facilities for such matters. There was also something in the circular (which we have mislaid) that any pharmacy might say, such as accurate dispensing, a well-selected stock of chemicals, drugs, and instruments for doctors and nurses; but the keynote was science as applied to pharmacy, which is a refreshing sound in these days, when people hide their individuality, or incompetence, under some drug-store cognomen. So a CHEMIST AND DRUGGIST representative went to No. 491 to see what manner of shop this is that opens its door upon a high principle rather than on a low-price basis. Our representative came away delighted, for he saw many unexpressed ideas carried out tastefully, even sumptuously.

The shop is a small one, and incapable of much display. Therefore it is to Messrs. S. Maw, Son & Thompson's credit that they have made so unique a pharmacy of it. American walnut is the wood employed, and the style recalls French renaissance furniture; at any rate, it is not showy, but bright and harmonious. From the window-enclosure to the back of the dispensing-counter the effect is a unity. About the window. Here there are the traditional, but not ancient carboys; a few specimens of drugs, and several frames of photomicrographs of bacteria, and actual cultures of pathogenic micro-organisms preserved *in situ*. On the shop-side of the enclosure is a prescription desk for doctors. The retail counter is small, and has nothing particularly novel about it. It is used for displaying a selection of common remedies, toilet lotions and the like. The wall-case display is good. On entering the pharmacy one sees to the right cases devoted to surgical instruments and appliances, chemical and physical apparatus (including microscopes), and the stock of nursing requisites is equal to the special effort made to cultivate nurses' business.

Thus far we have dealt only with the shop-fitter's achievements, but the work was drafted by Mr. Wallas, and it was when he came to put in the bottles and put down a dispensing-counter that Mr. Wallas's skill and taste came out prominently. The idea in ordering the bottles was not to fill the shelves but to provide for every article used in therapeutics, for there is a labelled-bottle for all, right down to remedies bought by the grain. The bottles were made to order in Bohemia, and the wording of each label drafted by Mr. Wallas and reproduced there on vitreous-enamel square labels. The lettering is Grecian in style, and every name is to the front. We have never seen anything else like it.

The dispensing counter is a double curve, like this:—



The front of it is show-cased, and the back is fitted for four dispensers, each of whom has ample working room, and each also has a set of stock bottles of the common things, of drawers containing utensils, bottles, labels, and so forth. Behind them is a great array of shop-rounds and glazed cases containing the poisonous and special remedies in actinic glass bottles. Mr. Wallas makes it a point to put these potent and unusual things behind glass. It is his way of giving trouble to get at things which should be selected with deliberation. Hand-scale weighing only is done at the dispensing-counter; when it comes to anything requiring special care there is a weighing pedestal behind with a Sartorius balance and Oertling scales for weighing large quantities. Here also is the desk, with a set of seven prescription-books, the first covering A and B, the second other letters, and so on to the end of the alphabet—a system which is found very convenient. The space at the back of the dispensing-counter is none too ample, and as the shop is

a single department, Mr. Wallas has run a 3-feet length of fixture at right angle to the wall, and behind this are a good bench for heating (including a fume funnel) and sink.

When any malodorous thing is to be compounded the dispenser goes downstairs with it, as the basement has been fitted as carefully, if not as expensively, as the shop. Here one finds drugs and herbs stored in neatly-labelled enamelled cans (Whittall, Tatum & Co.'s, we believe), chemicals in bottles, and cupboards full of stock of all kinds, especially surgical dressings, which are sterilised on the premises. There are several working benches in the centre and round the walls; and below the street ample cool vault for storing inflammable compounds. Mr. Wallas buys fine chemicals at first hand, and hopes his pharmaceutical *confrères* will go to him when they want anything of the kind.

It is in this basement that chemical analyses are done. The arrangements are orderly to a degree. There we noticed stills and sterilisers, as well as many other pieces of apparatus essential to scientific pharmacy, and all of these were in use. In regard to the distillation of water, Mr. Wallas informed us that he passes all the water straight from the main through a Berkefeld filter into the still, and by repeated testing he has failed to trace ammonia in the distillate, although the still is a continuous one. He is strong on sterilisation, and makes a feature of aerated-sterilised water in syphons. The pharmacy is in the heart of the medical district of London, and on the best side of the street, too, for doctors have a tendency to "flit" to the Grosvenor Square-region, as Harley Street and Cavendish Square are not what they once were. Mr. Wallas has fitted his shop for these doctors rather than for the passer-by, so any one who has kindred aspirations could not do better than inspect his arrangements. There is much detail which we cannot enter into here, but which appeals to the man whose mind is burdened with shop-fitting.

Business Hints.

THE liberal education which they give young pharmacists in the United States enabled Mr. George W. Hopping, treasurer of the Seabury & Johnson Company, to give the students of the New York College of Pharmacy some good business hints in a recent lecture. Below are some of the Hopping words of wisdom:—

In buying goods buy largely of the quick-selling staples in order to get the best terms from your wholesaler. Do not invest in unknown goods, and buy only very sparingly of slow-sellers, no matter what inducements are offered. Be careful not to overstock. Pay-day will come. Buy standard goods. You may think your customers cannot tell the difference, but honesty is the best policy, if you can hold on.

If you advertise at all, keep everlastingly at it.

In writing to your wholesaler enclosing an order, write the order on a separate sheet of paper.

Do not address your business communications to any person in the establishment with whom you may happen to be acquainted, as this often causes needless delay. Letters containing important orders are often addressed to a traveller or assistant who happens to be away on a business trip. The firm is naturally reluctant to open such communications, and forwards them to the person addressed.

Do not write to ask why your order has not been filled without repeating the order. The likelihood is that the letter containing it went astray. In general, when asking why a letter has not been answered, repeat briefly the contents of the unanswered letter.

Always have your name and address plainly printed on your postal cards and letter heads. Your signature may be just the thing for a cheque, on account of its illegibility, but although familiar to the assistant of your wholesale house, you cannot expect him to recall readily which particular Tom Jones it is who owns that curio of chirography.

THE Belgian Pharmaceutical Society have decided to celebrate the fiftieth anniversary of their establishment, which falls next year, by the holding of an international pharmaceutical congress in Brussels.

New Companies and Company News.

ACETYLENE TRUST (LIMITED).—Capital 6,000*l.*, in 1*l.* shares. Objects: To acquire, develop, turn to account, and deal with letters patent No. 12,047 for an "improved method of and apparatus for generating acetylene gas," and to manufacture, sell and deal in gas for lighting and other purposes. Registered without articles of association.

A. GREENHALGH & SON (LIMITED).—Capital, 2,000*l.* in 1*l.* shares. Objects: To acquire and take over, as a going concern, the business carried on by Adam Greenhalgh and Arthur H. Greenhalgh, at 33 Manchester Road, Bury, under the style or firm of "A. Greenhalgh & Son," and to carry on the business of extractors of teeth, and makers and fitters of artificial teeth. The said two vendors are the permanent Managing Directors.

R. GAY & CO. (LIMITED).—Capital 50,000*l.*, in 1*l.* shares (of which 10,000 are $\frac{1}{2}$ per-cent. preference). Objects: To acquire and take over as a going concern the business carried on by Theodore Carr, at York Works, York Road, City Road, E.C., under the style of "R. Gay & Co.," and to carry on the business of oil boilers and refiners, paint, colour, and varnish manufacturers, &c. Registered office, York Works, York Road, City Road, E.C.

MACPHERSON & CO. (LIMITED).—Registered in Scotland. Objects: To acquire and take over as a going concern the business of stationers, booksellers, printers, newsgents, chemists, and druggists, now carried on at 48 to 54 Point Street, Stornoway, in the Island of Lewis, by Hugh Macdonald, bookseller and stationer, of Oban and Stornoway, and by Samuel Lawrence, chemist and druggist, of Oban and Stornoway, and to develop, extend, and increase the said business. Capital, 900*l.*, in 900 shares of 1*l.* each. Registered without articles of association.

PETROLIA COMPANY (LIMITED).—Capital 5,000*l.*, in 1*l.* shares. Objects: To acquire the right to manufacture the "odourless, tasteless, colourless" or "O.T.C." brand of petroleum, and also the business of the Petrolia Company; to enter into an agreement with E. A. Muskett, merchant, of Uplands House, Slades Hill, Enfield, and J. B. Scammell, merchant, of 56 Leadenhall Street, London, E.C.; and to carry on the business of oil merchants, refiners and importers, and manufacturers of and dealers in preparations for the hair, patent medicines, embrocations, salves, ointments, &c.

J. & J. COLMAN (LIMITED).—Capital 1,350,000*l.*, divided into 100,000 5*l.* per cent. cumulative Preference and 35,000 Ordinary shares of 10*l.* each. Objects: To acquire, take over as a going concern, and carry on the business of millers and manufacturers of and dealers in mustard, mustard-products, cornflour, blue, blacklead, and paper, carried on at London, Norwich, and elsewhere, under the trade-style of "J. & J. Colman," and to enter into an agreement with Jeremiah J. Colman, Frederick E. Colman, Jeremiah Colman, Russell Colman, and Alan C. H. Colman. The first-directors (to number not fewer than three nor more than seven) are the said five vendors. Qualification, 1,000*l.* Remuneration, the sum of 5,000*l.* per annum divided between them.

GERMAN VISCID-MANUFACTURING COMPANY (LIMITED).—Capital, 10,000*l.* in 1*l.* shares. Objects: To acquire, develop, work, turn to account, and deal with an exclusive or non-exclusive licence to manufacture viscose under the German Patent No. 70,999, dated January 13, 1893, for the preparation of a derivative of cellulose soluble in water, called "Viscid," and to enter into an agreement with the Viscid Syndicate (Limited) for the purpose. Among the first signatories (each of whom takes one share) are:—Andrew Pears, jun., chemist, of Isleworth; Edward G. P. Thomas, chemist, of 107 Disraeli Road, Putney, S.W.; and Charles H. F. Gordon, chemist, of 2 The Mall, Brentford. The first directors are Andrew Pears, Andrew Pears, jun., Ferdinand Flinsch, and E. Thomas.

OXYGEN-PRODUCING SYNDICATE (LIMITED).—Meeting, 3 Lothbury, January 27, at 3, for an account of the winding-up.

KOKO MARICOPAS COMPANY (LIMITED).—Meeting, 11 Gray's Inn Road, January 25, at 12, for an account of the winding-up.

STANDARD OIL COMPANY OF GALICIA (LIMITED).—Resolved November 30, confirmed December 15:—"That the company be wound up." H. T. McAuliffe, 27 Billiter Buildings, Billiter Street, liquidator. Claims to the liquidator by January 31.

HOYLE (THOMAS) & SONS (LIMITED).—Petition presented, December 23, by H. Kupferberg, Yew Tree Chemical Works, Collyhurst Road, Manchester, manufacturing chemist; Abraham Lloyd and James Lloyd, trading as Higgin, Lloyd & Co., Little Peter Street, Manchester, manufacturing chemists; and Jacob Grossmann, Harpurhey Chemical Works, Manchester, manufacturing chemist. Hearing, Assize Courts, Manchester, January 11, at half-past ten. Sutton, Elliott & Turnbull, 13 Spring Gardens, Manchester, solicitors.

The P. A. T. A.

MEETING AT OXFORD.

ON Wednesday evening, December 23, a meeting of the chemists of Oxford was held at 108 High Street, Oxford, for the purpose of taking into consideration the scheme of the Proprietary Articles Trade Association. Most of the members of the trade, in the city were present. The chair was taken by Mr. Sheriff Claridge Druce, M.A.

Mr. Morrison laid before the meeting the plans which had been suggested for the support of the Association, and proposed that the chemists of Oxford should be asked to send a resolution in favour of the scheme.

Mr. Squire paid a subscription (5*s.*) as evincing practical sympathy with the objects of the Association.

Mr. Henry Mathews (Messrs. Hitchcock & Co.) spoke in favour of the Association, and proposed the following resolution:—

That the chemists of Oxford desire to express approval of the objects of the Proprietary Articles Trade Association, and pledge themselves to support it in every way; and strongly urge upon all Proprietors the advisability of adding their preparations to the Protected List.

Mr. Councillor Clayton seconded the resolution, and spoke strongly in favour of the scheme, of which he had been a supporter from its commencement.

The Local Secretary (Mr. Prior), Messrs. Walklett, H. Thurland, J. H. Mathews, T. Thurland, and J. H. Jessop supported the resolution, which was carried unanimously.

The outcome of the meeting was that five members renewed their subscriptions, and thirteen new members were enrolled.

MRS. KILDUFF: "Do you use condensed milk?" Mrs. Mullins: "I think it must be condensed. There is never more than a pint and a half in a quart."

CUSTOMER: "You are using a different kind of soap from what you were, aren't you?" Barber: "What makes you think so?" "It doesn't taste the same."

WHERE DOCTORS CONGREGATE.—It is customary for Italian medical men to have their "own" pharmacy—that is to say, one where they can be consulted daily at certain hours, while the proprietor, who dispenses the prescriptions, pays the doctor a certain commission. The Farmacia Cavedoni, in Rome, is particularly favoured in this respect, inasmuch as no fewer than twenty-five medical men make it their daily headquarters. There are no fewer than 153 pharmacies in Rome, but only about a dozen are said to flourish.

EUCHININ is the name of a bitterless derivative of quinine made by the action of ethyl-chlorocarbonate on the alkaloid. It crystallises in needles, and is readily soluble in alcohol, ether, or chloroform, but with difficulty in water, although the salts are, if anything, more soluble than the corresponding salts of quinine. Noorden, who has reported upon the compound, says 15 to 30 gr. doses can be taken without unpleasant effect. Some notes on his clinical experiments will be found in the *B.M.J. Epitome*, page 164.

GOLD MEDALS 1884-1886-1886-1888.

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No. 2 Pure FULLER'S EARTH	13/ cwt.	Finest Pure Sifted TOILET OATMEAL	21/ cwt.
Pure LIQUORICE	11/ lb.	Best Pure ARROWROOT	9/ lb. in tins.

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IN

 "The Chemist and Druggist" Winter
 Issue of January 30.

It will be found in the early part of the number.

MELLIN'S FOOD

For INFANTS and INVALIDS.


 "I conclude my lecture, gentlemen, by handing
 you a cartridge of
ITROSYL."

Editorial Comments

A REPRESENTATIVE DOCTOR ON CHEMISTS.

DR. ROBERT REID RENTOUL, of Liverpool, as we reported last month, secured the highest position on the poll for representative members of the General Medical Council. As the representative of at least 6,646 medical practitioners, we thought it might be interesting to ascertain how he felt towards the pharmaceutical branch of medicine, including

the prescribing variety of chemists and druggists. In response to our invitation, Dr. Rentoul writes as follows:—

As you have asked me to place my views before your readers upon some points which intimately concern medical practitioners and chemists, I shall only mention two very important questions:—

1st. "*Prescribing*" *Chemists and Dispensing Practitioners*.—In 1888 I read an address before the Liverpool Chemists' Association upon this subject. I take up the position that no chemist is lawfully qualified to prescribe for any diseased state. This is enacted partly in the Apothecaries Act, 1815. I think the Council of the Pharmaceutical Society should re-affirm this. I further hold that every registered medical practitioner is lawfully empowered to dispense and supply medicines for his own patients. To these two facts I mean to adhere. But I am totally opposed to practitioners who keep open shops—as is done in Ireland and Glasgow—for the sale of drugs. This should be prohibited. Coming to the question of chemists prescribing, I have advocated that medico-ethical societies should appoint committees to meet with representatives of chemists' associations so as to see whether an agreement cannot be entered into. I think ninety-five out of every hundred practitioners would give up dispensing if they could—if fees were not so shockingly low, if clubs contracted with chemists to supply the medicines instead of the surgeon, as is now adopted in connection with the Liverpool police surgeons and the police, and if this cant of medical "charity" were settled. If chemists will not agree, then I have suggested that the practitioners in each town form a company with branches, so as to have all their prescriptions dispensed at these—I mean that such companies should be managed in a business way, the only shareholders being practitioners, and a dividend not exceeding 5 per cent. being taken. There is no use chemists saying that people are too poor to pay the medical fees. For such as cannot there are the Poor Law and hospitals, municipal and voluntary. I also think chemists should not re-dispense prescriptions containing dangerous drugs and poisons without the written instruction of the practitioner—that is, that we follow the continental plan. I further feel that chemists should not sell "dangerous" drugs of any kind without the written order of a practitioner—a plan in force on the Continent.

I believe that eventually we shall have an Act making it illegal for practitioners to dispense and for chemists to prescribe—and the sooner the better, with the proviso that the practitioner shall have power to have both a "poison" and an "emergency" ease, but that such must be obtained from the nearest chemist. This is as it now is in Austria and Switzerland. It is too gross to feel that the practitioner must eke out a scanty livelihood by the sale of medicines. Further, I think that the foreign plan of allowing only one chemist to a given population is the only just one to the public and the chemist. Down grade-competition is ruining the honest chemist. A greedy public with their debauched truckling for everything cheap should not be pandered to.

2nd. As to the relation of the General Medical Council and the Pharmaceutical Council in preparing the Pharmacopœia, I feel that one body of men cannot do without the other. This fact is recognised by the Medical Council in its calling in and paying fees to chemists to help in compiling the Pharmacopœia. There are facts in the Pharmacopœia which only the chemist can have practical knowledge of, and *vice versa*.

Depend upon this—that if we practitioners and chemists do not agree to help each other the public will not help us. It is absurd and ludicrous for anyone to say that a body of 22,500 practitioners and about 18,000 chemists cannot successfully bring pressure to bear upon Parliament. I regret to find that members of the Pharmaceutical Council are not paid for their work upon their Council. This is a disgrace to the body of chemists, and I hope an Act will be provided which will make it obligatory on each chemist to pay an annual registration fee of 1*l.*—a plan now in force in many of the British colonies.

Neither time nor space will allow me to make further suggestions. The above provide work for a lifetime.

We are thankful to Dr. Rentoul for his politeness in giving such a clear expression of his views, and we think pharmacists generally will appreciate his evident desire to find common

ground on which doctors and chemists may work together. We do not wish to discourage Dr. Rentoul's faith in his picturesque fancies of a future when the prescriber and the dispenser shall work in perfect harmony, neither trespassing on the other's domain, and the public fecing both with a liberality which has yet to be born. But as time at the Medical Council table is said to be worth about a guinea a minute, it may be kinder to assure the new representative that his designs are in the main Utopian if not Laputan. We cannot understand, for example, why he and a great



DR. RENTOUL.

many other doctors should dream of a new statute to check the prescribing chemist while they have got the clause in the Apothecaries Act, which even Dr. Rentoul says "partly" meets the needs of the ease from the medical point of view. Partly! Lord Bramwell said it was strong enough to render a chemist liable to a 20*l.* penalty if he gave a draught for a headache. How much more do the doctors want? But the essential difficulty is that no Medical Council, with the support of the Pharmaceutical Council, and with an obedient Parliament asking only to be instructed, could establish such a state of things for a single week as Dr. Rentoul imagines. Is a chemist, or, for that matter, everybody, to be prohibited from advising a friend in regard to his toothache or the baby's bowels? And is he to be liable to a heavy fine if, following his advice, he sells sixpennyworth of the stuff he has recommended? Parliament has again and again refused to be a party to any such absurd proposal, and even the Apothecaries Act, passed more than four score years ago, was not intended to cover such a field. The Society of Apothecaries (as is shown in "Pharmacy and Poison Laws," page 11) especially consented to exempt from its operation the trade or business of a chemist and druggist altogether, and it was only in consequence of the addition of words by chemists themselves to the clause, in the mistaken idea that they were rendering the meaning clearer, that such judgments as those which have rendered counter-practice nominally illegal have been possible. But if it is impossible to enforce the Apothecaries Act, except in very flagrant cases, what reason can there be for assuming that the process would be easier if a new Act were passed?

The limitation of chemists and the suppression of "down-grade competition" are prospects which look sweet to many chemists; but we confess we see not the smallest chance of their possible advent. To judge of the probability let anyone draft a Bill aiming at the proposed objects and see how it reads in cold print. A clause in it providing for the taxation of chemists annually to pay members of the Pharmaceutical Council, which is another of Dr. Rentoul's

imaginings, would further recommend it to the limbo of hopelessness. Dr. Rentoul is probably unaware that the Pharmaceutical Society makes a handsome income every year out of the business which the 1863 Pharmacy Act gives it to do.

In regard to the Pharmacopœia, Dr. Rentoul does not appear to be acquainted with the claim which many pharmacists entertain. If their co-operation is, as Dr. Rentoul seems to recognise, essential, and especially if their business is to be seriously affected by what the book contains—as, for instance, under the Sale of Food and Drugs Act—should they not have a duly proportionate voice in the preparation of the work as coadjutors and not merely as paid experts, and some share in the property the value of which they do so much to create?

THE SUPPLY OF ZANZIBAR CLOVES.

THERE has lately been an extraordinary falling-off in the supplies of cloves received in Zanzibar from the plantations. From the beginning of September until the end of the first week in November of this year, the receipts of Zanzibar cloves were 5,270 frazilehs, and of Pemba cloves 22,219 frazilehs, whereas in the same period of 1895 they were 26,955 and 98,789 frazilehs respectively. People in Zanzibar are getting troubled about the matter, as the clove industry is the mainstay of the country, and the *Zanzibar Gazette* has therefore been enquiring into the cause of the matter. The general opinion seems to be that the falling-off is due to the late season and the heavy rains, and to the low price of cloves, which has led planters who could afford to do so, to keep back their supply instead of sending it to market. Some further light is shed on the matter by Mr. Gerald Clarke, Acting Collector of Customs, who has prepared comparative statements of the receipts of cloves at Zanzibar during the full year from September 1st to August 31st, instead of from September to March, which is generally considered the clove season, as during that time the fruit is picked, dried, and sent to market. Mr. Clarke's tables, which include the receipts at market of the first as well as the second crops, show that in 1894-95 the combined receipts of Zanzibar and Pemba cloves were 400,189 frazilehs (of 35 lbs. each), and that in 1895-96 they 574,959 frazilehs. The increase in the Zanzibar output was 63,201, in that of Pemba 111,569 frazilehs. There is no cause for uneasiness here, except in so far as the influence of this over-production upon the price is concerned. And there seems to be every reason to believe that the decline in value will begin to affect the production of the spice at not too distant a date. In 1895 the average price of cloves at Zanzibar was 4½r. per frazileh; in 1896 it was only 3½r., although just at the time when Acting-Collector Clarke was sending in his report there was a slight upward movement. But these improvements are only very slight, and they soon pass. During the bombardment-seare, for instance, the prices of clove in Europe suddenly rose, but it is now generally admitted that the bombardment, and the political events connected with it, did not affect the trade in the article in Zanzibar itself in the slightest. The supplies were simply held back during the two or three weeks of disturbance; that was all.

The increased output of the past two or three seasons Mr. Clarke ascribes to the coming into bearing of young trees. Up to the present time the laying down of new plantations appears to have been encouraged by the authorities, who have, for instance, provided free cloves for planting, and ground on easy terms, to freed slaves, in the hope of turning them into money-earning small farmers. Of course the ex-

slaves have not lived up to the expectations formed of them; they have not planted anything, and are not likely to do so while they can live without work. But there is a strong feeling among those engaged in the trade that it is time to stop that policy. In fact, the sixteenth century Dutch methods in the Spice Islands of uprooting all but a few trees would probably be more to their taste. Over-production of Zanzibar cloves, however, seems to be working its own cure. In Zanzibar Island the clove-trees are still fairly well cultivated; but in Pemba, which produces two-thirds of the crop, they are rapidly running to forest for want of proper husbandry. Singularly enough, the crop in Zanzibar itself fluctuates greatly, because, whether on account of climatic changes or for other reasons, the trees on each side of the island generally bear fruit in alternate years. Says Mr. Clarke:—

In both islands the shambas (plantations), especially those owned by Arabs, have of late been allowed to depreciate owing to the great scarcity of labour. If this is not rectified in time it will become a serious matter and detrimental to the trees themselves. If they had the attention which is due, by removing all the old non-bearing trees, replacing them by new ones, and if the ground were cleaned, and all rubbish burnt or collected and allowed to rot beneath the trees, so as to act as manure, it would in time enhance the production of cloves, but the want of manual labour still remains.

In Pemba the same complaint prevails, and although, so far as I can gather, the crop is very good (especially in the northern part of the island), more than 25 per cent., say, of cloves are left lying on the ground and are lost because the Arab planters have no labourers. Many Arabs who, formerly, had numerous slaves working have now not more than fifty, and even this number is decreasing owing to death and desertion, and, according to the present law, no new slaves may be substituted for those lost.

Pemba has its drawbacks owing to a want of regular communication between the islands, merchants having to send their cloves by dhow, in which, during the wet season, the spice gets saturated with rain and sea water, in consequence of which the cargo, when it arrives in Zanzibar, has to be re-dried and re-packed.

In fact, the prospects of the clove-industry seem to be pretty bad, and unless sufficient labour be imported the clove-price may go up, and the Zanzibar revenue down, before the end of the century.

THE BENEVOLENT FUND.

It has frequently been remarked by those who have to grant relief from the Benevolent Fund for Chemists and Druggists that the present is the hardest time that the drug-trade has had to go through. We never fully realised the truth of these remarks until we heard this week that the result of the Christmas appeals printed in this journal and the *Pharmaceutical Journal* has been the magnificent sum of 407! That is in subscriptions, for we understand that some generous men have given or offered sums largely in excess of that; but the point of the appeals was not to draw money from those who have given or are always ready to give. Rather was it to bring home to the poorest in the trade that this is a fund which exists for them, and that while they have a shilling or a florin to spare it would be good for them to give it while they can. There are 10,000 men and women on the register who can answer this practically. We suggested a way in which small sums could be brought together, and are glad to know that it has been carried out with success in several cases. As 200l. is wanted before annuitants are paid ten days hence, we hope that others will follow suit, and that many will send postal orders or stamps for small sums to Mr. Bremridge, 17 Bloomsbury Square, W.C. They may be given anonymously if desired. If any

of our subscribers who are renewing their subscriptions to the *C. & D.* care to add a trifle to the 10s, we shall be glad to hand over such sums to Mr. Bremidge.

MARKET-CHANGES IN DRUGS IN 1896.

THERE have been no great speculative movements in crude drugs in 1896 to compare with the "camphor-boom" of 1895. The nearest approach to a "boom" took place in the gum-acacia market in March, when, as a result of the military advance upon Dongola, there was a sudden wave of speculation in Soudan gums. It was a mere fizzle, however, which collapsed within a few weeks, and the gum-acacia market remains extremely dull, with over-supply in most varieties. Aloes of all varieties has been quiet throughout the year; the Cape grade closes a little cheaper than it opened, but there has lately been a movement in the Socotrine variety. Ambergris and civet have gradually cheapened. Large arrivals of asafoetida caused an unusual depression in the market last March, but this autumn there has been a strong inquiry, and a very considerable advance has been paid. Balsam Peru has fallen in value. Tolu was very scarce a few months ago, but is now more plentiful. Copaiba has kept very firm throughout the year, and the market has lately been cleared of good varieties. Colocynthis has been abnormally scarce and dear, and the same applies to most continental drugs—aconite, gentian, and belladonna roots especially. East Indian produce has shown a strong tendency towards higher rates during the year, castor oil being one of the drugs affected in this direction. Croton-seed has realised 82s. 6d. per cwt., the highest price on record for years, and Calumba has become scarce and dear. Cardamoms, also, have not realised so much money for years as they did about a month ago. Cinchona for quinine-manufacture has been in abundant supply, and the lowest unit known was reached at the Amsterdam auctions of Java bark in November. Singularly enough, fine pharmaceutical barks are scarce and realise prices out of proportion to their alkaloidal value. The camphor market has entirely disappointed those who believed in the ability of the syndicate to maintain prices. The syndicate, in fact, seems to be merely a name at present, the death of its principal member having put a stop to its operations, excepting those of trying to get rid of the accumulated stock. Formosa camphor, which opened at about 172s. 6d. per cwt., sold in the summer months at as low a figure as 87s. 6d. per cwt., c.i.f. terms. The price has improved again since then, but there seems to be little prospect that it will be maintained. Menthol and genuine kino gum have gradually cheapened. Ipecacuanha has been in rather good demand throughout the year, and closes somewhat higher than it opened. In opium there have been no violent fluctuations so far as the London market is concerned. Musk and rhubarb are now at last beginning to show an upward tendency. A number of American drugs and several products from Asia Minor have somewhat advanced in price. Vanilla has been very dear all through the year, the finer grades being particularly scarce. Saffron has almost doubled in price, because of crop-failure in Spain. In Japan wax there has been a considerable rise. The lowest quotation of the year was about 30s., the highest—from which we have but slightly descended—50s. per cwt. Star-anise and cassia oils have ruled high during the year, but are now falling in price. English and French essential oils have also been very dear, but American oil of peppermint has been lower in price than it was ever known before, and a large and excellent otto-of-rose crop has caused a lowering in the value of that article. The cod-

fishery in Norway was a failure, and in the middle of March 240s. per 25-gallon barrel was paid in London for fine non-freezing quality.

In the chemical-market there have been an unusual number of price-fluctuations. The heavy articles, however—sodas, potashes, and the like—show comparatively little change. Sulphur has slightly advanced, mainly as a result of the creation of a Sicilian sulphur trust, financed chiefly by British capitalists. Arsenic has been extremely scarce throughout the year; new sources of supply, it is said, will soon make their competition felt, but for the present this has not been the case. Sulphate of copper has been high in price, and the extended use of permanganate of potash has caused that important article to advance also. Carbolic acid and coal-tar products in general have ruled very firm and met with a ready demand at higher prices. The same applies to glycerin. Borax and boracic acid, after falling to extremely low rates, have slightly recovered. Chlorate of potash, after having been at an unusually low ebb throughout the year, has suddenly advanced owing to the destruction by fire of the Swedish electrolytic factory, which has been a sharp competitor lately to our own makers.

The general upward tendency in the prices of crude drugs and heavy chemicals has not been the rule in the articles generally known as "fine chemicals." Most of these are under the control of syndicates, generally of an international character, and the trouble these organisations have to combat successfully the underselling of "outside" makers, is becoming greater every year. This fact lies at the root of the drastic declines in price in such important articles as mercurials, salicylic acid, salicylates, acetic acid, and quinine. In the last-named article competition has sprung up in France, and is threatening in Java. Pilocarpine has been greatly reduced in price. Salicin and salol are also lower. Cream of tartar, tartaric acid and citric acid have fluctuated, but close without very much change. Refined camphor has followed the decline of the crude article. Advances in atropine, veratrine and cinchonidin, on account of scarcity in lithia, owing to the concentration of the trade into two hands; in morphia and codeia, in sympathy with the course of the raw material, and in podophyllin, on account of a sudden demand for South Africa, are but an imperfect compensation for the decline in a large number of the more important chemicals.

A QUESTION OF DENSITIES.

Says the *Medical Press*:—Huxley's formula for the "A.C.E." mixture, which was recommended by the Committee of the Royal Medico-Chirurgical Society, is as follows:—

	Parts			
Alcohol, sp. gr. 833	1
Chloroform, sp. gr. 735	2
Ether, sp. gr. 1,497	3

Our King William Street friend wants to buy chloroform cheaply, we suppose—say, a pint for 1 lb.

AN UNPATENTED GLYCERINE-PROCESS.

The genius who, under the name of Janet, expounds all mysteries in a paper called *Forget-me-Not*, furnishes in the issue of that paper for December 12 a process for making glycerine which in the way of simplicity leaves nothing to be desired. This is the item:—

HOW TO MAKE GLYCERINE.—Fill a cup three quarters full with lump sugar (best), and pour on a cupful of boiling water. Set the cup in a basin of boiling water until the sugar has dissolved. Then bottle and use.

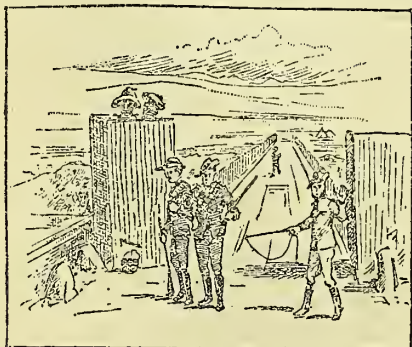
We hope the recipes for "cream-pudding" and "chicken-outlets" which follow this in the same column are based on sounder knowledge than Janet can boast of in regard to glycerine.

MORE LITERARY PAGES.

This number of *THE CHEMIST AND DRUGGIST* contains 40 pages of literary matter, and it will be found, as the year goes on, that the average space allotted to this section of our journal will considerably exceed that of any previous year. This will enable us to deal more fully and more promptly with the ever-increasing quantity of material which comes to hand, and to keep *THE CHEMIST AND DRUGGIST* in the unrivalled position it has attained among trade journals. It need hardly be pointed out that this addition involves a greatly increased expense for a journal with a circulation such as this one enjoys. The way in which subscribers who appreciate our efforts can best reciprocate is by encouraging, as far as they reasonably can, the firms who advertise in our pages. May we ask them to assist in this direction?

THE RIVAL MICROBISTS.

Dr. Edington, the Cape bacteriologist, has not allowed to pass unchallenged Mr. Pitchford's claim to be the possessor of a flourishing colony of rinderpest-microbes. nor Mr. Pitchford's assertion that the original discover of the rinderpest microbe is Dr. Simpson, of Calcutta. He points out, in a letter to the *Cape Times*, that Mr. Pitchford gives no data whatever in proof of his statement that the microbe culture at his field-hospital in Natal is that of rinderpest, and he rather scores by calling attention to the fact that Dr. Simpson's communication to the Microscopical Society of Calcutta, which forms the ground of Mr. Pitchford's assertion, was styled a "preliminary" notice by the author himself, and contains no evidence of the actual discovery of the microbe. Dr. Edington offers to place the results of his investigations freely at the disposal of Dr. Koch, who is now going about Cape Colony tracking the rinderpest germ. The German scientist has had a most flattering reception. One of the first sights to which he was regaled was Robben Island, the leper-colony of the Cape. After his visit to that place, Dr. Koch declared that Cape Colony was much in advance of Europe in its eagerness to get at the cause of things and its anxiety to avail itself of the scientific discoveries. He further committed himself, "with all modesty," to the promise that, with all the resources of science at his command, he would help the Cape. Meanwhile the rinderpest has been arrested at the Orange River, not by inoculation, but by a sanitary cordon, through which no animal from the infected districts is allowed to pass, and which fumigates passengers in the good old cholera style. In Matabeleland, where the domestic cattle were estimated at 100,000 before



the plague, practically none are left; and in Bechuanaland only a few thousands out of about a million. We reproduce from the *Cape Argus* a picture of the Fumigating Station at the Cape Colony end of Frere Bridge, Orange River. The sketch is very rough, but, being taken from a snapshot, it has the advantage of "actuality." Only niggers, we believe, are fumigated in this unceremonious fashion, whites being sterilised in more elegant style.

MR. CHARLES LEDGER'S PENSION.

The influence of the Press has been illustrated in a somewhat remarkable manner, in the case of our own journal, by the grant of an annual pension of 100*l.* to Mr. Charles Ledger by the Government of the Netherlands. Thirty-one years ago Mr. Ledger, with much trouble, and at great personal risk, collected in Bolivia and brought home to Europe a supply of the cinchona-seed called after him—*Ledgeriana*. The Dutch Government bought the seed outright for about 150*l.* From this seed the bulk of the Java cinchona-plantations, which have yielded millions of profit, was raised. Meanwhile Ledger disappeared. He was supposed to have died years ago in South America, when a letter was received by us stating that he survived, and lived in a back block of New South Wales in great poverty. He had come across a stray copy of *THE CHEMIST AND DRUGGIST* containing a statement about coca, and wrote to us to criticise that statement. It happened that two other cinchona pioneers, an Englishman and a German, had just died, and we asked Mr. Ledger for some of his own reminiscences. Then we tried, together with Mr. (now Sir) Clements R. Markham, F.R.S., President of the Royal Geographical Society, to raise a subscription for Mr. Ledger among those who had benefited by his venture. The attempt failed. Mr. Ledger applied to the Dutch Government for some further recognition of his services. It was refused. We enlisted the assistance of an influential Dutch newspaper on his behalf, but in vain. Mr. Ledger's friends, however, kept arguing his claims with persistence, we wrote to the Ministry of the Colonies in the Hague, and now, after eighteen months of pegging away, the Dutch Parliament has at last recognised the justice of Mr. Ledger's claim and granted him the pension, which we hope he may long live to enjoy, though he is already in his seventy-ninth year.

FORMALDEHYDE AS A DISINFECTANT.

MM. Roze and Trillat have studied the disinfecting action of formaldehyde-vapour, and embodied their conclusion in a pamphlet entitled: "*Essais de désinfection par les vapeurs de Formaldéhyde*" of which a copy has been sent to us by Messrs. R. W. Greeff & Co. The authors produce formaldehyde-vapour by two methods: Dr. Bardet's apparatus for oxidising methyl alcohol, and the autoclave *formogène*, in which a solution of commercial formaldehyde is heated in the presence of from 4 to 5 per cent. of a neutral chloride, or other salt readily soluble in water (if chloride of lime is used it should be first powdered, and added by small instalments). The autoclave was made to work successively in rooms of various sizes, the air of which was strongly impregnated with pathogenous germs, as were also objects, such as clothing, bedding, &c., placed in the rooms. As a rule the duration of the experiment was ten hours, and it was found that specimens from the air in the apartments, taken at the conclusion of the experiments, and introduced into culture-broth, had produced no fertilisation after as long a period as thirty days, with the exception of the *bacillus pyogenes aureus*, which in certain cases proved difficult of sterilisation, although it was ultimately overcome. In the case of specimens of fine and coarse dust taken from rooms and corridors immediately after sweeping, impregnated with the germ-containing matter, which were suspended over a peptonised culture-broth in a vessel containing formal, it was found that the broth with the small particles remained clear after thirty-six hours, while that containing the coarse dust had become cloudy. The authors conclude that formaldehyde-vapour exerts an almost immediate action, and forms an excellent and effective mode of disinfecting apartments, while there is no danger of toxic symptoms arising from the generation of carbon-dioxide.

Analysis of Oil of Lemon.

By A. SOLDINI AND E. BERTÉ.

THE problem how to estimate the quality of oil of lemon is an extremely difficult one. The principal question is, whether a given sample is pure; the determination of the precise nature and proportion of impurities is not always possible. Professor Oliveri has suggested the use of the polarimeter as a means of unmasking adulteration, and this process might partly have filled all requirements if natural lemon oil did not differ so much in its optical rotation, according to the crop, the particular district, &c., and if adulteration were confined to the admixture of French turpentine oil. But the method becomes useless where the adulteration is made with a calculated mixture of sweet-orange oil and turpentine. And even where the admixture is only turpentine oil the polarimeter gives misleading results if, as is often the case, the adulterator uses an oil of lemon of high optical rotation, say, $+66.0^\circ$ or $+67.0^\circ$, inasmuch as genuine oil of lemon (judging from a sample made under our own eyes) may only deviate $+58^\circ$. It looked as if such an oil should have been very rich in citral, but that did not prove to be true in our case, the percentage being only 5.5 per cent. Citral very seldom falls below such figure, whereas it may reach 8 per cent.; usually it ranges between 5.5 per cent. to 7.50 per cent. Systematic annual experiments with the product of different districts and at different stages of maturity might be interesting, as establishing medium figures for the different centres of production. Little value can be attached to the percentage of citral from the analytical point of view, owing to the low price of lemongrass oil, and decisive conclusions can be arrived at only with a rather complicated method of chemical analysis.

The method adopted by us since the end of the 1894 season is based on fractional distillation *in vacuo*. Schimmel & Co. (Beicht, October, 1896) publish part of this method. Our experience, however, differs from theirs with regard to pure oil of lemon, which we find invariably yields a distillate having a *higher* rotation than the oil of lemon it is derived from, and *not a lower*, as Schimmel & Co say. Fractional distillation is to-day the only method by which we can be sure of purity of oil of lemon. The following table shows the polarisation of four samples of oil of lemon compared with French turpentine:—

Degrees of Polarisation, (Temp. 20° C.)	Garufi	Sander- soni	Sofio	Sarauw	French Turpentine Oil
Sp. rot. of the oil ..	$+60.15^\circ$	$+60.10^\circ$	$+63.20^\circ$	$+63.00^\circ$	-28.00°
Sp. rot. of the distillate ..	$+64.00^\circ$	$+64.50^\circ$	$+65.30^\circ$	$+65.00^\circ$	-21.00°
Sp. rot. of the residue ..	$+57.20^\circ$	$+59.00^\circ$	$+60.45^\circ$	$+61.12^\circ$	-33.00°

Generally 25 c.c. of the oil have been submitted to distillation, stopping after 5 c.c. had passed over. The specific rotation of both the distillate and the residue was then taken, after which the distillation was continued, in order to study the different fractions.

The average rotation of oil of lemon might be put at $+61.3^\circ$; it rarely goes below $+59.0^\circ$, whilst it goes up to $+65.0^\circ$ and more. Every hundredth part of turpentine oil (sp. rot. -28.0°) added to oil of lemon effects a decrease of about 1.0° ; therefore, to an oil possessing a high rotation, 5 per cent. of French, and even more of the American, turpentine can safely be added.

In the case of apparently genuine oils having a low rotation, $+53.0^\circ$, fractional distillation must be resorted to before condemning the oil. As the terpene of turpentine distils at a lower temperature than the terpene of oil of lemon, it is easy to discover by fractionation as little as 1 per cent. of added turpentine. When orange oil is added to lemon oil in order to cover the presence of turpentine, the sensibility of the method is greatly diminished, but still about 2 per cent. of turpentine can always be discovered. At times, when sweet-orange oil is lower in price than lemon

oil, much importance attaches to the estimation of citral taken in conjunction with the knowledge of the average percentage of citral given by the different producing districts and crops. Unfortunately, our data for such an examination are, at present, rather scanty. Helbing (*Pharmaceutical Record*, xxx., September, 1894) ascribes great importance to the citral estimation, but his method remains a secret. Garnett (*THE CHEMIST AND DRUGGIST*, xlviii., page 499) published a method for the estimation of citral, which has been criticised by J. C. Umfrey in the same journal (xlviii., page 614), and is commented upon in Schimmel's October report at great length, the result being summarised as follows:—"An analytical method which yields figures deviating so much from the correct ones must be rejected as useless, especially when the estimation of a substance like citral and citronellal is concerned, with which an accuracy amounting to 0.01 per cent. is requisite." Our own method for the estimation of citral is based upon the well-known reaction of the bisulphites upon the aldehydes. It is as follows:—A solution of bisulphite of potash is shaken with the oil of lemon, whereby the whole of the citral of the oil is fixed, and separated from the lemonene and the other compounds that have no aldehydic function. The decrease in volume is then estimated under identical conditions of temperature, and the volume of citral calculated. When relatively large quantities of turpentine or orange oils, and even lemonene, are present, a correction must be made. The greater the proportion of citral to estimate, the larger is the difference between the ascertained and the calculated quantity of citral in the known mixture; but generally oils do not contain more than 7.5 per cent. of citral. We have used this method (for want of a better) for nearly two years. The following are the results of the examination of several mixtures with known quantities of citral:—

	Found	Calculated	Difference
	Per cent.	Per cent.	
Mixture No. 1	8	8.4	less 0.4
Mixture No. 2	5	5	—
Mixture No. 3	7.25	7.5	less 0.25
Mixture No. 4	7.25	7.38	less 0.13
Mixture No. 5	4	4.5	less 0.5
Mixture No. 6	5.1	5.5	less 0.4
Mixture No. 7	5.1	5.5	less 0.4

Mixtures Nos. 1, 2, and 3 were made from pure lemon oil, to which citral and lemonene were added; No. 4, lemon oil, turpentine, and citral; No. 5, lemonene and lemon oil; Nos. 6 and 7, turpentine oil and citral, with the difference that No. 6 had been coloured. The percentage of citral of the pure lemon oil used was 7.50 per cent. by G. H. Ogston and Moore, and only 7.25 per cent. by us. The table shows that the presence of turpentine, and even of lemonene, somewhat falsifies the results; and the same, judging by other experiments made, can be said with regard to the presence of oil of orange. The reason is to be found in the fact that when an unusual quantity of adulteration is present, the liquid left after shaking with the bisulphite is not perfectly transparent, so that in certain instances, by taking the reading the day after, differences of volume, which should not be neglected, are found. The proof of this can be had in the following analyses, made with pure citral (Kahlbaum's) and lemonene obtainable by fractional distillation of lemon oil:—

	Found	Calculated	Difference
	Per cent.	Per cent.	
Mixture No. 1	6.50	6.66	0.36
Mixture No. 2	10	10.6	0.6
Mixture No. 3	6	6.4	0.4

The separated liquid was turbid, and the day after sensibly decreased in volume. Though the method is possibly susceptible of improvement, it seems that it always gives somewhat less than what is calculated, but in order to form an exact criterion of the more or less exactness of the method it is necessary to gather a much greater number of results, which we propose to do.

With regard to citral: When we undertook these researches, many business people doubted that the chemist could discover certain adulterations, even of the common kind; and in reality, notwithstanding the noise made with the estimation of citral, the analytical question had not even advanced a step. The fractional distillation in conjunction with the polarimeter has solved fairly completely the difficult question. The trade, however, is no longer satisfied with this, inasmuch as they would like to know exactly how much turpentine, lemon oil, lemonene, and even bergamot are contained in a mixture. Though the way is now so clear that more complete results may shortly be expected, still let the trade for the present be satisfied that the chemist tells them in a sure way whether a given oil is pure, or how much foreign matter, approximatively, it contains. Going by our method, an oil of lemon containing less than 5.5 per cent. in weight of citral should be viewed with suspicion; but it would not be just to declare as adulterated an oil poor in citral, when neither oil of turpentine nor any other foreign matter could be found present. The adding to an oil of its own natural constituents (lemonene and citral) does not constitute, chemically, a true and proper adulteration.*

Laboratory of General Chemistry of the Messina

University, Messina, November 5.

Ufficio d'Igiene Municipale

(Laboratorio Chimico),
Messina.

Literary Notes.

We have been using for some time a valuable dictionary of organic compounds, compiled by Dr. Fr. Pollak, which we believe many pharmacists will be glad to hear of, because it shows at a glance (1) name, (2) constitutional formula, (3) preparation—by equations, (4) m.p.—if any, (5) b.p.—if any, (6) form and colour of crystals—if crystalline, (7) solubility in water, alcohol, and ether, and (8) references to literature. There are 500 pages in the book, and the information, as far as we have checked it, is fairly accurate. The title is *Tabellebuch der organisch-chemischen Verbindungen*, and it is published at 7m, by Mr. Otto Nemnich, Karlsruhe.

It is one of the faults of our English system of pharmaceutical education that physiology is not included in it, and is rather discouraged. That is owing to the stupid provision included in the 1852 Pharmacy Act to appease the anxiety of the doctors of those days who saw in the qualification of pharmacists a possibility of future rivalry to them. In spite of that a few enlightened chemists' assistants take care to get what physiology they can when they are at their studies, and it is in the hope that this class will increase that we call attention to the new edition of Kirke's "Physiology" which has recently been published†. This was a favorite book when present-day veterans in the medical profession were at their studies, and that it should still be popular, especially in English medical schools, is excellent proof that it has kept pace with the very great progress of physiology during the past thirty years. Dr. Halliburton's work on the fourteenth edition has made the book practically a new one; it is admirably arranged, is written in lucid style, and the illustrations are admirable, those of stained pathological sections which are reproduced in natural colours in the black-ink text being as fine an example of English typography as we have seen. Since animal extracts and antitoxic serums have taken so important a place in therapeutics it behoves dispensers to acquaint themselves with the leading facts in human physiology; and we do not know any work which will better suit their purpose than Dr. Halliburton's. The book is rich in chemical methods which pharmacists sometimes want to know.

* Surely this opinion cannot be justified. A large amount of lemonene is reported to be used in place of turpentine for diluting natural oil of lemon, and it seems to us exactly on a footing with adding water to wine. We may add that we have condensed the communication somewhat, but have not removed any material fact.—Ed. C. & D.

† Kirke's *Handbook of Physiology*. By W. D. Halliburton, M.D. F.R.S. 14th ed. 8vo. Pp. 874. With numerous illustrations, including coloured drawings in the text. John Murray, Albemarle Street, W. 14s.

WE have to acknowledge receipt of a new and revised edition of Mr. J. Castell-Evans's *New Course of Experimental Chemistry* (Thomas Murby, 3 Ludgate Circus Buildings, E.C., 2s. 6d.), which is one of the most original books of instruction for beginners in chemistry, because it develops their power of observation and thinking faculties; also of the 6d. *Everybody's Medical Guide*, published by Saxon & Co., 23 Boulevard Sirey, E.C., which is a useful little book for chemists to sell.

Our Baby; for Mothers and Nurses. By MRS. LANGTON HEWER. 4th edition. Bristol. John Wright & Co: 1s. 6d.

THIS is a book for inexperienced mothers and other persons who have charge of children. It is intended for the better classes only—*i.e.*, those who can afford a good nurse—and the information is given in chapters as replies to such questions as these: "Is baby all right?" "What shall I dress baby in?" "What shall I feed baby on?" "What shall I feed baby on NOW?" "Why does baby not get on?" &c. It seems to us one of the pitifullest of things that a mother should have to go to an eighteenpenny book for the most elementary facts regarding the management of her baby, and we venture to say that a woman can no more learn how to wash a baby from print, than a man can be taught how to hold it by the same process. Yet the fact is that there are many intelligent women in the world who will be thankful for "Our Baby." It is a useful book, and will carry the mother on until she is so full of experience that no book in the world can give her points. Even we, masculine minded though we are, are conceited enough to think we could give Mrs. Hewer a few points, and here they are. First, Mrs. Hewer does not say anything when she describes how baby is washed about cleaning baby's mouth. [We may remark here that we shall try our best not to call baby "it," but we cannot claim perfection in this nomenclature.] Perhaps there are not many mothers who think of the inside of the mouth being dirty, until the doctor comes and orders a dose of castor oil or a saccharated-calomel powder. Well, that can be avoided by letting the baby suck the sponge when it (the sponge) is first dipped in the warm bath water. The little dears soon get to like it and it does them good. Second, Mrs. Hewer says: "The whole body is then rapidly washed with a piece of flannel and plenty of soap." A great mistake in our opinion. There are only a few parts of the baby's body which need soap—the head and what we may call "the corners"—and the soap used for these is sufficient to make the water soft enough to cleanse the rest of the skin. Third, Mrs. Hewer is one of those well-meaning persons who insist that babies must be fed "every two hours by the clock." This is a terrible fetish, yet there is no more common rule, and thousands of infants are condemned to cry their little hearts out until the clock-hand comes round. Suppose the poor thing has slept for three hours after its last tiny meal of 3 or 4 oz. of milk (its stomach does not hold much more), gets up to another meal and has it, the rule says the clock-hands must go another two hours before baby gets breast or bottle again; yet in thirty or forty minutes he is as hungry as a hawk, and gives the usual manifestations thereof. Should he wait for the clock-hands? No, we say. Babies vary so much that fixed rules for all of them are a mistake, and Mrs. Hewer would do well to give a little more elasticity to her dicta on that point. Her booklet is a good one; were it not so we should not have devoted so much space to matters which many people consider trifling. It is a book which chemists might sell.

BEWARE OF CHEAP DRUGGISTS.—Chemists' shops where "cutting" is the order of the day abound at every street-corner. Of late years they have sprung up like mushrooms. Is this for the good of the community? We think not. Cheap drugs mean inferior drugs, if not substitution—*i.e.*, the dispenser replaces an expensive drug in a prescription by a less expensive one of similar attributes. Positive danger to the patient may arise from such practices. And we showed last year, in publishing the statistics of a Food and Drug Inspector, what errors in dispensing are made by second-rate dispensers. Then, again, notwithstanding the activity of inspectors, the adulteration of drugs is very prevalent. And where may we expect to find these inferior drugs if not at the cheap druggists':—of whom we say, Beware!—*Science Siftings*.

Trade Reports.

42 CANNON STREET, E.C., December 31.

THE markets have scarcely re-opened since the beginning of the holidays, and only very few alterations can be recorded. In fine chemicals we have to report steady prices for citric and tartaric acids. Refined camphor has been again reduced by 2d. per lb. both for English and foreign, and the prospect is weak. Cream of tartar keeps quite steady. Quinine is extremely dull of sale. A slight reduction in the official quotations of bismuth salts will be made public to-morrow. Cinchonidine is scarce and tending higher. In heavy chemicals, carbolic acid is quiet at last week's reduced prices. Chlorate of potash very firm at the advance. Cyanide still declining in price. Yellow Prussiate is also easier. Aniline oil and its salts are lower. Sulphate of copper firmly held. Arsenic remains scarce and dear. The chief alteration in the drug market is a slight decline in crude Formosa camphor, while the quotation for Japan is more or less nominal. Balsam Peru is quiet, and in copaiba there have been arrivals. Small consignments of cardamoms are also coming to hand. Gentian root firmly held. In gum acacia there is little trade. Ipecacuanha quiet; 67 bales Brazilian have been received. Castor oil lower for French. Opium quiet. Star anise firmly held on the spot; but easier for arrival. In colocynth there has been further business at the reduced prices. Medicinal seeds generally quiet. Caraway seeds easier. Cod liver oil is dull of sale, and lower figures would be taken. Musk, on the other hand, is reported extremely firm for fine qualities. In essential oils there are few noteworthy changes. Star anise oil is easier. Cassia oil much lower, especially for arrival. Lemongrass and citronella oils show no change. Italian lemon oil of the new crop is offering very cheaply, and looks like becoming lower steadily. New sweet orange oil, on the other hand, is firmer. There is a hardening tendency for a considerable number of American drugs. Lycopodium is somewhat easier. In the absence of public sales there is scarcely anything of fresh interest to report in the spice and drysalt markets. Zanzibar cloves are slow and tending easier. White pepper is steady, and black pepper more active. Shellac is quiet but steady. The turmeric-market presents no new features. There has been some demand for blue Persian galls; other kinds are dull of sale. Linseed oil slightly firmer. Rape oil unchanged both for crude and refined. Palm, and other oils.

We believe that in consequence of certain representations made to them, the three English manufacturers—viz., **Quinine Weights.** Howards & Sons, the Imperial Quinine Company, and T. Whiffen, have agreed, from January 1, to mark all the quinine in bulk sent out from their works with the exact weight of the contents, and of the tin itself, as well as with the date upon which the quinine was made. The foreign manufacturers have not yet agreed to do the same, but it is thought that they look upon the suggestion favourably. They are, however, somewhat hampered by the opposition of secondhand holders, who are naturally not very well satisfied with the proposed innovation. We understand that the proposed marking of the tins is viewed favourably by the entire British wholesale drug-trade.

The Société des Fabriques de Produits Chimiques de Thann et de Mulhouse, of Thann, Germany, proprietors of Muse-Baur, have brought a suit for infringement of their rights, in the United States Circuit Court, against John Sander, described in the complaint as "a resident of England," and Hatch & Wickes, his agents in the United States. According to the

O. P. & D. Reporter the plaintiffs say that in January 1896, Sander imported into the U.S. 22 lb. of artificial musk, which was invoiced simply as "powder;" that, with intent to defraud the Government, he entered the merchandise at a value of \$3,606, but that its character was ascertained, and that the appraiser fixed the value at \$5,376. The plaintiffs aver, however, that it was artificial musk in a highly concentrated form, and worth over \$33,000. Plaintiffs further allege that the U.S.A. Government seized the merchandise for under-valuation, but that the said Sander is trying, through his agents, to get possession of the musk, and that he keeps his whereabouts a secret in order to avoid personal liability. In August, Hatch & Wickes offered to pay an additional duty of \$476.50, in order to obtain the goods, and \$100 to defray the expenses of the Government in the forfeiture proceedings. The complaint further states that the plaintiffs believe that Sander and the other defendants intend to permit the forfeiture to be effected, with the intention, if the goods are confiscated and sold at auction, of buying them back. Plaintiffs ask for a perpetual injunction restraining defendants and their associates from making or dealing in artificial musk made in infringement of their patent rights, and from further attempting to obtain possession of the seized goods. Messrs. Hatch & Wickes deny all knowledge of the existence of patents and any intention to defraud, and they ask that, owing to the perishable character of the merchandise, the court will order the goods to be sold at once, the proceeds to be held by the Government subject to the forfeiture proceedings.

Our New York correspondent telegraphs on Wednesday evening: "There has been a very strong movement within

New York Cablegram. the last few days in indigenous drugs, and a number of advances in prices are reported.

Golden seal root is quoted at 26½c. per lb., and for *Mandrake root* the quotation varies from 12c. to 15c. per lb., but the general tendency is higher. *Serpentaria* is in strong demand but extremely scarce. *Blood root* has gone up another cent per lb. since last week, to-day's quotation being 15c. For *Lobelia herb* 9c. per lb. is asked, and *Eonymus root-bark* is at 15c. per lb. *Wintergreen oil* is also dearer at \$1.30 per lb. for good genuine. *Sassafras oil* is brisk at 45c. per lb., and for *Spearmint oil*, which also is in demand with a rising tendency, from 160c. to 175c. per lb. is asked, according to quantity. New crop *Damiana leaves* are quoted at 7½c. for fair green, and for *Gum chicle* the quotation is 23½c. per lb. *Mexican sarsaparilla* offers at 5c. Quotations for *Newfoundland cod liver oil* generally come easier. *Balsam copaiba* of all varieties is firmly held, *Angostura* at 48c., *Maracaibo* at 47c., and *Central American* kinds at 45c. per lb."

Our Smyrna correspondent, telegraphing on Wednesday afternoon, reports an excited market. American agents have bought 260 cases during the week, and their purchases continue. They appeared as buyers as soon as they found some holders willing to accept a slight reduction, and the business done this week includes *Fair manufacturing* at the parity of 8s. 9d. (which is 1d. below last week's quotation), and *Selected* kinds at 8s. 11d. per lb., f.o.b. (which is a reduction of 3d. per lb.). The market is now firm, and closes with an expectation of further sales.

ACID (CARBOLIC).—Quiet, but steady. *Crystals*, 39° to 40° C., 7½d. to 7½d.; 34° to 35° C., 7d. per lb. *Crude*, 75-per-cent., 2s. 4d. to 2s. 6d., 60-per-cent., 2s. to 2s. 2d. per gallon. *Cresylic*, 95-per-cent., 11½d. per gallon.

ACID (CITRIC).—Steady at 1s. 1d. to 1s. 1½d. per lb. for *English B.P.*

ACID (TARTARIC).—Fairly steady, at from 12½d. to 12½d. per lb. for *English B.P.* brands, and 11½d. per lb. for foreign on the spot, B.P. standard not guaranteed.

BALSAM COPAIBA.—The *Brunswick* has just brought 13 cases from Maranhão to Liverpool. These come to a very bare market. There has also been an arrival of 35 packages from Hamburg.

BALSAM PERU.—On the spot 7s. 4½d. per lb. has been paid for good quality of direct import.

BISMUTH SALTS.—The result of the recent conference on 'Change of British manufacturers of bismuth salts has been an agreement to keep to a certain scale of prices. A new list of quotations has been drawn up, and will come into force to-morrow. It is as follows:—

	Under 56 lbs.	56 lbs.	Assorted parcels of at least 112 lbs.	550 lbs.
	s. d.	s. d.	s. d.	s. d.
Carbonate, B.P. per lb.	3 11	3 10	3 8½	3 8
Subnitrate, B.P. "	3 6	3 6	3 3½	3 3
Oxide, B.P. "	5 8	5 7	5 5½	5 5
Oxide for cosmetic purposes, in lump or powder "	3 11	3 10	3 8½	3 8

These prices show a slight reduction on the late official quotations. Bismuth metal is still quoted at 3s. per lb.

CAMPBOR (CRUDE).—*Formosa* gum is still declining. Quotations for arrival are about 5s. per cwt. lower on the week, January-February shipment offering to-day at 93s. per cwt., c.i.f., but there are no buyers even at that figure. *Japan* camphor offers at 110s. per cwt., c.i.f., for near at hand, and at 117s. 6d., c.i.f., for distant shipment. There is a rumour, at present unconfirmed, that American houses have been buying considerable quantities in Japan recently.

CAMPBOR (REFINED).—On December 24, 1896, the English refiners reduced their camphor-quotations by 2d. per lb., the present prices being as follow:—

For wholesale parcels	Under ½ ton	½ ton	1 ton or more
	s. d.	s. d.	s. d.
Bells and flowers	1 5	1 4½	1 4
Tablets of ¼ lb., ½ lb., or 1 lb. ..	1 6	1 5½	1 5
Tablets of 1 oz. or 2 oz.	1 7½	1 7	1 6½
Tablets of ½ oz.	1 8	1 7½	1 7
Tablets of ¾ oz. or 1 oz.	1 8½	1 8	1 7½

The price of *German* refined camphor has also been reduced in the same ratio, bells being now quoted at 1s. 3½d. for 20-cwt. and 1s. 4d. per lb. for 10 to 20 cwt. lots.

CARDAMOMS.—There have been further arrivals of 18 cases by the *Manila*, and of 15 cases by the *Glenearn* from Colombo.

CHAMOMILES.—It is reported that the demand on the Continent for *Belgian* chamomiles is so good that some of the growers have instructed their agents to return the stock held in London, as it can find a better market abroad.

CINCHONA.—At next week's auctions will be offered a new arrival of 20 cases of *South American* red bark. The average quality is said to be pretty good, and part of the consignment is of nice red colour. The sales will also include about 44 bales of *Guayaquil* crown bark and 7 serons of flat cultivated *South American calisaya*.

CINCHONIDINE.—In strong demand, and tending decidedly higher. For sulphate of cinchonidine as much as 6d. per oz. is now asked in some quarters.

COLOCYNTH.—Further sales of some importance are announced on the basis of last week's quotations, though in some cases a little less money is said to have been accepted. It is generally believed that there will again be practically no crop of *Syrian* colocynth this season.

CREAM OF TARTAR.—Steady at 82s. per cwt. for best white *French* crystals, and at 84s. for powder.

GALLS.—Blue *Persian* are in better demand, but holders are extremely firm, and only little business has been done. The quotation is now from 48s. to 50s. per cwt. on the spot. In green and white galls there has been no change, the former being quoted at from 40s. to 45s., the last named at 40s. to 44s. per cwt. *Chinese* galls unaltered at last week's quotations.

GENTIAN.—Has been arriving rather freely; besides several

smaller consignments, there were in the *Chusan* 44 bales of root and powder for London, and 110 bales in transit. The only variety for which there is a really constant and good demand is the so-called insoluble *Persian*, which realises from 13s. to 16s. per cwt. for sorts according to quality, and 10s. 6d. for good block. Fine selected gum is held for from 20s. to 24s., red and pale mixed clean at from 16s. to 18s. per cwt. Some good *French* genuine root is offering in second-hand at 30s. per cwt., London terms. It is said that no more can be imported at that figure. Foreign powder is offering to arrive at 28s. per cwt. c.i.f. terms.

GUM ACACIA.—*Soudan* gums are extremely quiet, although in some quarters they are fairly firmly held. For very fine soft pale sorts 80s. per cwt. is quoted; ordinary hard to good are held for 62s. 6d. to 75s. per cwt. In picked *Trieste* gums there is also little business doing; the prices range from 7l. 10s. to 12l. 10s. per cwt. for good, while for fine pale the nominal price is 14l. 15s. per cwt. *Senegal* gum quiet at 60s. per cwt. for good *Bas du fleuve*. *Galam* gum is not offering for the present; good *Mogador Amrad* is worth 36s., and brown *Mogador* 37s., though for some fine lots as much as 40s. per cwt. is asked. In *East India Ghatti* gum there has been a moderate business at a decline of about 2s. 6d. per cwt., sales being reported at from 27s. 6d. to 30s. per cwt. for fair to good quality.

IPECACUANHA.—The *Bellenden* has just brought 50 bales from Buenos Ayres, and there has been another arrival of 17 bales by the *Clive* from the same port.

MENTHOL.—Quiet at 7s. 9d. per lb. on the spot.

MUSK.—Is said to be very firmly held. It is reported that very fine thin blue skin first pile *Tonquin* pods have realised 90s. per oz. privately, and some of the importers are asking even more than that.

OIL (CASTOR).—Tending lower. The importers quote from 27l. 10s. to 28l. per ton f.o.b. for first *French* pressings, and from 26l. 10s. to 27l. for second pressings. For medicinal oil in barrels the price is 29l. 10s. per ton f.o.b. It is, however, possible to buy below these figures from second-hand holders.

OIL (COD-LIVER).—Very flat. The manufacturers are fairly steady in their views, but second-hand holders appear very anxious to sell and would accept considerably lower prices—although in the absence of business it is difficult to give precise quotations. The mildness of the season and the proximity of the opening of the new season are factors operating against an improvement in prices. Our Bergen correspondent writes on December 26 that business is almost at a standstill, and prices have declined to 145s. per barrel f.o.b. for best non-freezing *Lofoten*, and 140s. for ditto *Finnmarken*. There is now very little stock left in Bergen, but it is believed that some considerable supplies are still held in the northern towns in Norway. In London the market is extremely dull. Best 1896 oil offers at 135s. c.i.f. terms, and there is some talk of 140s. per barrel c.i.f. as a speculative quotation for new oil, January shipment.

OILS (ESSENTIAL).—The stock of *Star-anise* oil is rapidly increasing. There have been arrivals almost every week lately, but a good part of them is sent away to the continent. The nearest spot price is 7s. 6d. per lb. For arrival the importers quote 7s. 1½d. per lb. c.i.f. January-February; second-hand holders ask 6s. 3d. to 6s. 4d. c.i.f. for distant, 6s. 9d. c.i.f. for near at hand, and 7s. per lb. c.i.f. for a parcel due next week. *Cassia* oil is "all going to pieces," quotations, especially for arrival, being much lower. On the spot 80-85 per cent. oil is held for 8s. 3d. to 8s. 6d. per lb., and sales of 70-75 per cent. oil are reported at 8s. per lb. To arrive the quotations are much lower for all positions. Japanese *Peppermint* oil offers at 5s. per lb. spot, and 4s. 6d. per lb. c.i.f. for 40 per cent., 3s. 9d. per lb. spot and 3s. 3d. per lb. c.i.f. for dementhol-*Lemongrass* and *Citronella* oils quiet but unaltered. New crop Italian *Lemon* oil offers at low prices, from 3s. to 3s. 9d. per lb., c.i.f., according to holder, but it is difficult to effect sales and the market is easy. *Bergamot* oil is also quiet. *Sweet orange* oil is somewhat firmer at 6s. to 6s. 6d. per lb., f.o.b. for fair to good oil of the new crop.

OPIMUM.—No business can be reported in *Turkish* opium, which is held for unchanged prices. In *Persian* of good quality some business has been done; quotations run from

10s. to 10s. 3d. per lb. for fine, 9s. to 9s. 6d. for medium, and from 7s. to 9s. per lb. for ordinary quality.

ORRIS ROOT.—The new crop is arriving in fair quantities from Italy, and there have also been small arrivals from Mogador.

PODOPHYLLIN.—Firmly held. The makers are offering very little, and are asking 15s. per lb. for B.P.; in second hand, however, some holders would accept a little below this figure.

POTASH SALTS.—*Chlorate* firmly held. *English UAC* make is quoted by the manufacturers at 4½d. per lb., but f.o.b. Liverpool 4¼d. per lb. is the current quotation. The spot quotation in London is 4¼d. to 4¾d. per lb. There is no immediate prospect of a reduction, as the United Alkali Company now practically hold control of the market until the Swedish factory, which was burned down recently, is again in a position to resume manufacture. *Cyanide of potassium* still on the downward grade; 11d. is now the quotation for large quantities of 98 to 99 per cent., but we hear of prices even below that figure. *Yellow prussiate* is still tending easier. The *Beekton* brand offers at 5½d. per lb. nett, other English brands at 6¼d. per lb.

QUICKSILVER.—The importers' quotation is now 6l. 12s. 6d. per bottle, and at the close the market is rather firmer in second hand—viz., 6l. 9s. 6d. to 6l. 10s. per bottle.

QUININE.—Very dull of sale; the nominal quotation for second-hand *German* is 9d. per oz.

SEEDS.—*Russian anise* on the spot is fairly steady, and more business is doing at low prices—viz., 15s. 6d. per cwt. for fine quality. Good Italian anise is held for 18s. 6d.; Spanish for about 27s. per cwt. For *Turkish canary seed* the price is from 27s. 6d. to 28s. per quarter. Good *Morocco* is in very small supply and quoted at from 30s. to 34s. according to quality, while for good *Spanish* 40s. per quarter is asked. *Caraway seed* slightly easier at 21s. per cwt. for Dutch on the spot. *Cumin seed* offers at from 22s. to 25s. for Mogador, and from 29s. to 34s. for Malta, according to quality. Sales of English *Coriander* have been made at 18s. per cwt. *Morocco* may be had at from 8s. to 8s. 6d., and there is a considerable quantity of Tunisian offering at 7s. 6d. to 7s. 9d. per cwt. *Fennel seed* is quoted at 14s. per cwt., c.i.f., for Turkish; *Fenugreek seed* at 10s. to 10s. 6d. for Mogador. East Indian is wanting at present.

SHELLAC.—Business in this article has been extremely quiet, and the market is practically closed this week. Second *Orange* of fair TN quality on the spot is changing hands in small quantities at 80s.; free AC *Garnet* at 86s. per cwt. For shipment the quotation is 74s. to 75s. per cwt., c.i.f., January-February steamer. For delivery there are buyers of TN February-March at 76s., but no sellers below 77s. per cwt., and for shipment 74s. to 75s. per cwt., c.i.f., January-February is quoted.

SPICES.—*Zanzibar cloves* remain extremely dull, and sales have been made at lower prices. Fair quality on the spot is quoted at 2¼d. per lb. For delivery sales have been made at 2¼d. for January-March, and there are now sellers for March-May at 2½d. per lb. *White pepper* remains very dull of sale with some business in fair *Penang* on the spot at 3½d. per lb.; for good fair *Singapore* 4½d. has been paid. There is a good inquiry for *Black pepper* on the spot, but sellers are rather firm at 2½d. per lb. for fair quality. A parcel of old import has been sold at 2¾d. per lb.

STAR ANISE.—Firmly held at 100s. per cwt. for genuine *Chinese* on the spot, but for arrival the market is easier, at 79s. per cwt., c.i.f., or even less.

TEA.—The market is quite closed so far as public sales are concerned, but the country demand is beginning to revive after the holidays, and teas for prices, especially Assam Pekoes under 7d., and Pekoe Souchongs under 6d., are being taken readily at recent easy rates, so that it is likely that Monday's Assam and Tuesday's Ceylon sale, the opening sales of the New Year, will show steady prices for these sorts.

VANILLA.—The market remains firm, but there have been large arrivals this week, amounting to 96 cases, the bulk of which will probably be offered for sale at next week's auctions. Two cases have also come from Auckland by the *Hawke's Bay*, and 11 cases Fiji by the *Ormuz* from Sydney.

WAX (JAPAN).—Dull of sale, the nearest spot quotation being 47s. 6d. per cwt.

The Liverpool Drug-market.

Our Liverpool correspondent, writing on December 29, says that the market is quiet in consequence of the Christmas holidays, although in some quarters there is rather more inquiry than usually at this time of the year. *Castor oil* has been commanding a good deal of attention owing to arrivals, and sales of good seconds Calcutta have been made as low as 3½d. per lb., but the price has now recovered to 3¼d. per lb., at which sales have also been effected. Madras good seconds are held for 3¼d. per lb., but no business is passing in this grade at the moment. First pressure French has fallen to 2½d. per lb., at which there are still sellers, and second pressure is held at about the same figure. There is no expectation of any change in the position of *Soudan sorts* of gum acacia at present, notwithstanding the continued dearth of orders, as the efforts that are being made in the Soudan to restrict trade must tend to steady the European markets. A parcel of Brazilian gum has arrived, and will be offered shortly. *Cream of tartar* is very firm at 85s. to 86s. per cwt. for first white French and Spanish. More movement is noticeable in *Beeswax*, and Chilian is feeling the influence of the late orders—an advance of about 5s. per cwt. having been established—present values ranging from 6l. 15s. per cwt. to 7l. 15s., according to quality. Gambia and Sierra Leone are in good supply, and at the moment are not quotably changed in value. *Fenugreek-seeds* are quiet at 11l. for good Alexandrian, with but little business at this figure, as buyers look for lower prices. *Russian anise* is beginning to arrive, and holders talk of 18s. 6d. to 19s. per cwt. for the new crop. *Spermaceti* is firmly held for 1s. 5d. both for English and Chilian. *Canary-seed* continues in a lifeless condition, and 28s. 6d. per quarter may be considered the present value of good bright Turkish. *Sulphate of copper* is in very strong hands at 17l. 15s. per ton, with a brisk demand, spot and forward deliveries. White powdered *Arsenic* is also in improved demand at 23l. 10s. to 24l. per ton net.

The Hamburg Drug-market.

Our Hamburg correspondent writes on December 29:—“Business is very quiet here at present, partly owing to the Christmas holidays, partly to the strike, which is not yet over. There are still about 10,000 dock-labourers and 3,000 lightermen on strike; the places of the latter cannot easily be refilled. Our drug-market shows very little business and few alterations of prices. *Agar-Agar* (*Japanese isinglass*) is quiet, at 265m. per 100 kilos. *Antimony* a shade firmer, at 37m. per 100 kilos. for crude. *Tartaric acid* steady, at 230m. per 100 kilos. *Balsam copaiba* unaltered, at 3.90m. to 4m. per kilo. for pure genuine Maracaibo. *Balsam Peru* is quoted to-day at 16m. per kilo. *Balsam tolu* is dull, and can be bought at 5m. per kilo. *Cape aloes* is unchanged, at 45m. to 46m. per 100 kilos. *Cardamoms* very firm and scarce. *Camphor* (*refined*) very quiet; there are second-hand sellers at 285m. per 100 kilos., but there is hardly any business doing at present in this article. *Chlorate of potash* unchanged, at 76½m. to 77m. per 100 kilos. Prime Russian *Cantharides* are quoted 410m. to 420m. per 100 kilos. *Coca-leaves* very quiet, at 140m. to 150m. for good Bolivian. *Cassia-lignea* is firm, new crop is quoted at 65m. to 66m. per 100 kilos., while old crop realises several marks more. *Ergot of rye* is a shade firmer, at 95m. to 100m. per 100 kilos. *Honey* unchanged; there is still some demand for Chilian or Peruvian Honey Pile II. & III. at low prices. *Menthol* steady, at 18m. per kilo. *Cascara sagrada* unchanged, at 32m. per 100 kilos. *Russian anise* is steady, at 29m. to 30m. per 100 kilos. *Cumin-seed* firmer; 45m. per 100 kilos. is asked for Malta-seed. *Lyceopodium* again easier, at 260m. per 100 kilos. *Cod-liver oil* is dull, with very small demand; 1896 non-congealing oil is quoted 130m. per barrel. *Castor oil* much quieter, and obtainable at 57m. per 100 kilos. in barrels. *Cassia oil* and *Citronella oil* offer sparingly on the spot. *Peppermint oil* HGH is quoted at 1¼m. to 7¾m. per lb., Todd at 7m. per lb., Japan oil at 7m. per kilo. *Star-anise oil* 18½m. per kilo. *Star-anise-seed*, newly-arrived, can be bought at 190m. to 195m. per 100 kilos. *Quinine* unchanged, at 25m. per kilo. *Japan wax* is quoted at 83m. to 85m. per 100 kilos. *Carnauba wax* dull of sale, grey at 95 n. to 93 n., medium at 110m. to 120m. per 100 kilos.

Price-list of Fine Chemicals.

THE following are some current wholesale market quotations of fine and miscellaneous chemicals and other preparations not specially enumerated in other parts of our Trade-report. All prices are for large wholesale parcels, delivered in London.

Articles	Price December 31, 1896
Acetanilide	per lb. 1 3 ⁴ to 1 6
Acid, acetic, 98-100 per cent. glacial	per cwt. 36 3 " 38 0
" " 33 per cent. (B.P.)	14 3 " 15 0
" " 30 per cent.	13 6 " 14 0
" boracic, ref. powder	31 6 " 32 0
" " crystals	29 6 " 30 0
" benzoic, crystals, ex toluol	per lb. 2 2 " 2 4
" " ex resina (B.P.)	4 0 " 4 6
" chromic, crystals, B.P.	1 3 " 1 4 ¹
" " commercial	0 7 ¹ " 0 9
" caryophanic	20 0 " 21 0
" gallic	1 9 ¹ " 2 2
" hydrocyanic, B.P. p. doz. 1 oz. bottles	2 9 " 3 3
" " (Scheele)	0 2 ¹ " 0 2 ¹
" nitric, 1-360 s.g.	0 2 ¹ " 0 4
" " 1420	9 " 9
" " 1500 pure	0 3 ¹ " 0 3 ¹
" oxalic	1 3 ¹ " 1 6
" picric (crystals)	6 6 " 9 0
" pyrogallic, resublimed	1 4 " 1 10
" salicylic, powder	1 6 " 1 10 ¹
" " crystals	3 0 " 4 0
" " phys. pure	0 3 " 0 3 ¹
" sulphuric, B.P.	1 1 " 1 1 ¹
" tannic	2 6 " 3 6
Aluin	13 6 " 17 6
Alum (chrome)	per cwt. 36 0 " 38 0
" ust., crystals	40 0 " 42 0
" powder	0 2 ¹ " 0 3 ¹
Ammonia liquid, 880=28°	per lb. 33 0 " 34 0
Antim. crocus, crystals	per cwt. 36 0 " 37 0
" powder	21 0 " 22 0
" black sulph., crystals	23 0 " 25 0
" " powder	0 10 " 1 0
" golden sulphide	per lb. 1 1 ¹ " 1 3
" oxide, B.P.	0 10 " 1 2
" pot. tart.	0 10 " 1 0
" powder, B.P.	0 5 ¹ " 0 6 ¹
Antimony regulus (metal)	per oz. 2 8 ¹ " 2 9 ¹
Antipyrin	13 6 " 13 8
Atropine, pure	11 0 " 11 3
" sulphate	3 0 " 3 11
Bismuth, carbonate, B.P.	per lb. 3 8 " 3 11
" metal	3 0 " 3 11
" oxide, B.P.	5 5 " 5 8
" subnitrate, B.P.	3 3 " 3 6
Borax, ref. crystals	per cwt. 19 6 " 20 0
" powder	20 6 " 21 0
Caffeine, pure	per lb. 19 0 " 19 0
" citrate, B.P.	13 6 " 13 6
Camphor, refined, bells	1 3 ¹ " 1 5
" tablets	1 5 " 1 8 ¹
Caramel	per cwt. 20 0 " 25 0
Carmin	per lb. 14 0 " 15 0
Chalk, French, powdered	per cwt. 5 6 " 6 0
" " cut in slices	30 0 " 30 0
Chloral hydrate, crystals	per lb. 3 11 " 4 3
" Liebreich	4 9 " 5 4 ¹
Cinchonidine sulph.	per oz. 0 5 " 0 6
" hydrochlor.	0 7 ¹ " 0 9
Cinchocine sulph.	0 3 ¹ " 0 5
Cobalt, chloride	per lb. 2 10 " 2 10
" nitrate, crystals	3 1 " 3 4
" black oxide	7 2 " 20 0
Cocaine hydrochlor.	per oz. 11 5 " 11 9
Codaine, B.P.	11 6 " 11 9
Collodion, meth.	per lb. 1 4 " 1 4
" B.P.	4 9 " 4 9
Coumarin	per oz. 2 4 " 2 6
Emetine, light (alkaloid)	48 0 " 48 0
Ergotin, B.P.	per lb. 5 6 " 5 9
" Bonjean	5 3 " 5 6
Ether, rectified, 0.750	4 2 " 4 6
" " 0.735, B.P.	4 2 " 4 6
" pure, 0.720, B.P.	4 10 " 5 2
" butyric, absolute	5 5 " 5 5
" methylated, 0.730	0 7 ¹ " 0 7 ¹
" " 0.717 (abs. anæsth.)	1 3 ¹ " 1 3 ¹
Eucalin	per oz. 0 8 " 0 8
Euonymin, B.P.	per lb. 20 0 " 20 0
" green or brown	24 0 " 26 0
Gold (chloride), in 15-gr. tubes	per doz. 18 3 " 19 6
Heliotropin	per oz. 1 7 " 1 9
Hydroquinone	per lb. 6 6 " 7 0
Iodine, resub.	per oz. 0 9 " 0 9
Iodoform, B.P.	per " 15 6 " 15 9

Articles	Price December 31, 1896
Iron, sulphate	s. d. 16 0 to s. d. 20 0
" reduced, by hydr., pure	per lb. 1 1 " 1 2
" black	0 11 ¹ " 0 11 ¹
Jalap, resin, B.P.	9 0 " 10 0
Lithia carbonate	9 4 " 9 9
" citrate, crystals	5 0 " 5 6
Magnesium, ribbon and wire	13 0 " 18 6
" powder, bars, or shavings	12 3 " 13 0
Mercurials:—Hydrarg. bichlor.	2 1 " 2 4
" chlorid.	2 5 " 2 8
" nit. oxyd.	2 9 " 3 0
" " levig.	2 9 " 3 0
" oxyd. flav.	2 10 " 3 1
" precip. alb.	2 10 " 3 1
" sulph. alb.	1 10 " 2 1
" nig.	1 9 " 2 0
Morphia, hydrochlor. powder	per oz. 5 0 " 5 3
" crystals	5 2 " 5 5
Naphtalhin, white	per cwt. 17 7 " 21 0
Nickel, metal cubes, 99-100 per cent.	per lb. 1 7 " 1 8
" sulphate	0 6 ¹ " 0 8
" ammonio	0 6 ¹ " 0 7
Peroxide of hydrogen, 10 vols.	per gall. 1 8 " 2 0
Phuacetin	per lb. 5 0 " 14 3
Pilocarpine, B.P.	per oz. 65 0 " 65 0
Podophyllin	per lb. 13 6 " 15 0
Potassium oxalate, neutral crystals	0 6 ¹ " 0 6 ¹
" bromide	1 8 " 1 9
" cyanide, 98-100 per cent.	0 11 " 1 1
" iodide	11 6 " 12 0
" prussiate, yellow	0 5 ¹ " 0 6 ¹
" permanganate	70 0 " 80 0
" prussiate, red crystals	per cwt. 1 2 ¹ " 1 12
Quinine sulph., in vials	per lb. 0 11 ¹ " 1 2
" " in bulk	0 9 " 0 11
Resorcin, re-cryst. white	6 3 " 6 9
Saccharin, 300 strength	per lb. 34 0 " 35 0
" 500	45 0 " 48 0
Sal acetos, powdered	0 4 " 0 7
Salicin	10 0 " 10 6
Salol	3 2 " 3 6
Sal prunella, balls	per cwt. 39 0 " 42 6
" cakes	29 0 " 32 6
Santonin	per lb. 5 2 " 6 0
Scammonium, virgin	30 0 " 34 0
Scammony, resin	11 0 " 12 0
Silver, metal	per oz. 2 5 ¹ " 2 5 ¹
" nitrate, crystals	1 7 ¹ " 1 8
" sticks	1 8 " 1 8 ¹
Sodium, sulphite, comm. to pure	per cwt. 12 0 " 17 6
" salicylate, powder	per lb. 2 5 " 2 9
" crystals	3 0 " 3 4
Sodium acetate, white crystals	per cwt. 20 0 " 21 0
" pure	32 6 " 35 0
Strychnine, precip.	per oz. 1 9 ¹ " 1 10
" crystals	1 10 ¹ " 1 11
Sugar of milk, crystals or powder	per cwt. 60 0 " 75 0
Sulphonal	per lb. 16 0 " 17 0
Terebene, pure	1 0 " 1 1
Terpene, hydrate	1 7 " 2 0
Terpineol	4 3 " 5 6
Thymol, crystals	6 9 " 7 0
Turpentine, Cbian	6 0 " 10 0
" Venice	per cwt. 70 0 " 70 0
Urethane (ethyl)	per lb. 13 0 " 14 9
Urotropine	per oz. 0 10 " 1 6
Vanillin	14 0 " 15 0
Veratrine, B.P.	4 9 " 5 3
Vermilion, English	per lb. 2 2 " 2 3
" Chinese	2 6 " 2 7

The Market in Heavy Chemicals.

Owing to the holidays, business in the heavy chemical market is not very brisk. A fairly steady tone however, is prevalent, and prices are well maintained on the whole. *Sulphate of ammonia* is steady and in better demand. Beekton terms 7l. 10s., Hull and Leith 7l. 12s. 6d., London 7l. 13s. 9d. From Leith 111 tons were exported last week. *Sulphate of copper* is dearer; Anchor 17l. 15s., Liverpool January-April 17l. 15s. Quotations for *Benzol* are merely nominal, there being little or nothing doing; 90 per cent. 2s. 9d., January-March 2s. 8d. and 50 per cent. 2s. 7d. January-March 2s. 5d. *Aniline oil and salts* are lower; the former is quoted 8d. to 9d. and the latter 7¹/₂d. to 8d. per lb. *Chlorates of potash and soda* firm. *Yellow prussiate of potash* lower, foreign 5¹/₂d. to 5³/₄d., English 6d., ground 6¹/₂d. *Recovered sulphur* firm and scarce. White powdered *arsenic* is still only in limited supply and prices remain very firm. *Green Cypreas* in good demand, Welsh makes being very scarce. *Hyposulphite of soda* steady. *Barium* products in fair request. *South Durham Salt* steady. *Bleaching-powder* and *Caustic soda* steady and moving well.



In writing letters for publication, correspondents should adopt a concise, but not abbreviated, style. They are requested to write on one side of the paper only. Letters, with or without a non-de-plume, must be authenticated by the name and address of the

Notice to Correspondents.

writer. Queries should be written on separate pieces of paper, and the regulations printed under the sections to which they apply should be strictly observed.

Notes on "The Chemists' and Druggists' Diary."

SIR,—Permit me to call attention to an error in your Dispenser's Formulary on page 265 of the DIARY. Bromidia is stated in the pamphlet issued by the makers to contain $\frac{1}{2}$ gr., and not $\frac{1}{2}$ gr., each of the extracts of cannabis and henbane.

The variations upon the original formula seem to be quite unnecessary. Premising knowledge of the solvent powers of chloral hydrate over resinous substances, no competent chemist would find any difficulty in compounding this preparation from the data furnished by its makers. Probably most dispensers make and keep that convenient solution of chloral hydrate of which each minim contains 1 gr. Rubbed down in a porcelain dish with the required quantity of this solution, the extract of cannabis readily dissolves; then add the extract of henbane and rub it down; then the powdered bromide, with a little more than twice its weight of water; dissolve and make up to the exact volume. That it should be thought necessary to send to St. Louis for so simple a matter is only accounted for by the preference of the medical profession for what is "far fetched and dear bought," by their colossal ignorance—as a rule—of drugs, and by their almost universal reluctance to take counsel with the nearest competent pharmacist as to the best mode of combining and exhibiting them.

May I put forward another formula for Dutch drops, which, though it does not profess to exactly imitate the original *Medicamentum gratia probatum*, resembles it in consistence, I think, more nearly than the one given on page 275?—

	Parts			
Balsamum sulphuris	2
Oleum picis	1
Oleum juniperi ex lign.	1

All by weight.

Would there be any practical objection to a modification of the formula for Dobell's aperient, which avoids the necessity for evaporation, and makes the completed quantity or unit of dose 1 fl. dr.—*e.g.*

Extract. cascara sagrad. liq.	..	..	℥ 144
Ext. rhei	..	..	gr. 24
Jalapini	..	..	gr. 12
Tr. podophyllini (1 gr. in 60 min.)	..	..	5ss.
Cocaine hydrochlor. (dissolved in 5ss. aqua)	gr. 2		
Olei caryophylli	..	..	℥vi.
Glycerini	..	..	5i.
Sp. vini rect. al	..	..	5iss

Dissolve the jalapin in about 3 dr. of the spirit; add the solution of cocaine and the glycerine, and rub up the extract of rhubarb in the mixture until dissolved; mix in the remaining ingredients and filter.

The elixir aurantii is so admirable a flavouring that its use is becoming general. For the benefit of the dispenser who may be called upon for it at short notice, I give a formula by which it may be prepared quickly, provided the essential oil of orange is at hand, as it should be, mixed with an equal volume of alcohol.

Weigh into a $\frac{1}{2}$ -pint bottle 4 oz. of simple syrup; add to it $\frac{1}{2}$ fl. dr. of the mixed oil and alcohol; shake well together; then add, continuing the agitation, 14 fl. dr. of rectified spirit. Replace the bottle in the scale-pan, and make the total weight $\frac{1}{2}$ lb. with distilled water, and shake together.

Yours obediently,

Dover, December 19.

J. F. BROWN.

The P.A.T.A.

SIR,—It has been suggested to me that some exception may be taken to my last week's letter, because I have not taken sufficient notice of Mr. Day's disbelief in my statement to the meeting at Craven Hall. He thinks the retail councillors of the P.A.T.A. misunderstood my figures. They did, but not to any appreciable extent. What I said was that "I had received as much as between 40s. and 50s. a month commission on sales" (*vide C. & D.*, August 29, 1896). The actual high-water mark reached was 45s., and seldom or never below 40s. This slight correction, however, makes no difference to the arguments of the retail section. I notice they based their calculations not on 50s. but 25s.

A few figures may simplify matters. Messrs. Boots admit that one-eighth of their sales represented their own preparations.* Whilst far from accepting this as a correct proportion, it is perhaps near enough for my purpose. I have now no data whereon to base my true average takings, but it is within my recollection that in the busy season I have taken from 20% to 25% per day—a storeman tells me he has been approximating 30% at the present time. However, say 20% per day; this gives us per month of twenty-seven working-days 540%. One-eighth of this sum is practically 67%, on which commission is paid, giving 17. 13s. 6d. An eighth may be true of Messrs. Boots' stores, but it is much too low for any stores I have been at. I should say 25 per cent. would be a moderate estimate, and my commission tends to prove it.

Notwithstanding that I have been, and am, such a successful salesman, I draw the line at protected articles. When I see proprietors such as Messrs. Powell and Lambert studying my interests, I at once put their goods on a different footing to St. Jacobs oil or Carter's pills. When Scott's pills are asked for they are promptly handed over the counter without let or hindrance.

Yours truly,

Brixton, S.W., December 26.

J. MILNE.

SIR,—I was glad to see "Red Dragon's" letter, and a good deal may be said for it. I think it was to a great extent the fault of chemists themselves that so many stores were started. If they had lowered the price of patents before they were forced to do so, it would not have tempted so many grocers and others to take them up, and the difference between the two parties would not have been so great; but now the prices have been down it will not be so easy to raise them again as some seem to think. I for one can say that customers will take another kind rather than pay the extra. My sale of Carter's pills has nearly disappeared. I don't sell one now to the two dozen I did at 10 $\frac{1}{2}$ d., and I am sure it will be worse for those patents whose "min." price is 13 $\frac{1}{2}$ d. than for those at 1s. I hope they will all be 13 $\frac{1}{2}$ d. soon. I think some chemists (and manufacturers, perhaps) will soon wish they had not joined the P.A.T.A. Suppose they withhold their 5s. subscription next year, will they be suspected of cutting? Will their supply be stopped? I know a Trade Union that has increased in power to such an extent that the officers at the head of it have compelled thousands of its members to do the last thing they ever thought of doing, and so it might be with the P.A.T.A. if they ever get the power they would like. This is the first and last from a

MODERN RETAILER. (263/47.)

SIR,—The old year is closing its eyes in death. If an inquest is held, the verdict will be "Died a natural death." Is this not a very appropriate time for a certain section of your correspondence to die a natural death?

I am alluding to the correspondence which has been going on in the *C. & D.* for a number of years respecting patent medicines and the cutting-prices of the same. What good has it done? None at all.

Many are the *pros* and *cons* urged towards solving what is called the patent-medicine difficulty, but every remedy proposed is worse than the complaint. One correspondent says, "Boycott them"; another says, "Wipe them out altogether"; another says, "Don't stock them at all," &c. All these remedies might look very alarming to the proprietors and

* To prevent misunderstanding, we may interpose the remark that Messrs. Boots have not (so far as we know) admitted any such thing. The delusion was made by Mr. Glyn Jones in some comments on one of Mr. Boo's letters.—EDITH.

large dealers if it were not for the fact that they all spring from a branch called "Idiosyncrasy," and are only the overflow of an idiotic brain.

Wipe them out! Don't stock them, indeed! Let anyone try it, and in a very short time they will wipe themselves out. All their customers will leave them, in time, for the very reason they don't keep (or won't keep) what the public want.

We are passing through an age of progress. These are go-ahead times, and every 'cute, wide-awake business-man will keep his eyes open to see what his customers want. He will never send a customer away with the remark, "I don't stock it." He will stock everything which he has a call for, and be obliging to everyone in the bargain.

It is true the profits on patents are very small (and I can only offer my sympathy to all retailers, and wish their profits were more reasonable), but the condition of things as they now are as regards the cutting-prices of patent medicines is only the result of actions of bygone days, or the harvest of seed sown many years ago.

I admire the pluck and energy of Mr. Glyn-Jones in his work of trying to restore to the chemist a good share of his lost 40 per cent. profit on each transaction. His labours are great, but his success very little. True, he has many small fish to his credit; but I can tell Mr. Jones that neither his net nor his bait will ever catch the large and weighty fish.

I would ask him, can he offer any advantages to any large dealers or to the proprietors? Will his scheme benefit any one of them? I can tell him it won't; there is not one that has anything to gain by it, but all, more or less, would lose by it.

If Mr. Jones can get the English House of Commons to pass an Act to compel all tradesmen to sell at the same price, then (and not till then) will he stand some chance of success.

England prides herself on being a free country. An Englishman prides himself that he is at liberty to buy in a free market—to sell in a free market. A can sell to B without having the power to say, "I won't allow you to sell these goods under such-and-such a price." I contend that at whatever price B sells to C, C has a perfect right to sell at what price he likes. And so long as this principle of "freedom of action" is one of England's greatest blessings, Mr. Jones will never succeed in the task he has undertaken. If Mr. Jones turns the screw of coercion too tight he may bring about a collapse before he is ready for it. Success is impossible. Hope will keep it alive for a time, and bright expectations will at times be visible; but it will without doubt be a failure, and vexation and disappointment will be the result.

Sixty years of practical experience has taught me (and it will anyone) that if you want to succeed in business you must keep your eyes open and adapt yourself to coming events and to surrounding circumstances. The drones, the drowsy, the careless, and the indifferent ones stand no chance nowadays. You must find out what the public want and supply them with it. Sell them what they ask for—not offer them "something quite as good"; it don't pay in the long run. A customer likes to get the article he asks for, and if one can't (or won't) supply them another will.

With respect to imitation and substitution, that was always rampant—nothing will stop it! It does not affect many—it is only done by the fringe of that section of society called dishonest dealers. The best way to treat a substitutor is, when you catch him dancing make him pay the piper.

Yours truly,

OXONIAN. (1/18.)

SIR,—“Red Dragon” does not say what inducement he offered the half-dozen Sheffield chemists to give him orders for his proprietary; whether he was prepared to guarantee them a fair profit. If he did not, I cannot see how he could expect orders.

“Red Dragon's” argument is in favour of the P.A.T.A., for if this Association had been started then, he could have offered the whole retail trade an assured profit and would have taken orders instead of refusals. The way it strikes me is that the Sheffield chemists were not willing to be made geese of, even with the privilege of laying golden eggs for someone else.

I have no idea who “Red Dragon” is, or what his preparation is, but I presume it is one bearing a face value, and

that it is being sold at from 10 to 20 per cent. under this face value.

I contend that as the proprietors fix the face value and their wholesale value, they are morally bound to use their best endeavour to assure the profit to the retail trade, otherwise the face value must be regarded as fictitious, and should be lowered by them.

If proprietors do neither of these things, they must be regarded as hostile to the retail trade, and should be treated as such, as they put into the hands of the stores a weapon which is turned against the retail trade—namely, the power of advertising priced articles at prices considerably lower than the face value.

I commend to all readers of the *C. & D.* the letter of Mr. Reid in your issue of December 19, recommending chemists to put upon the market articles of their own, on a co-operative system of their own. This idea has been thought of seriously by a good many members of the retail trade. Could not some strong Association, such as the Midland, take this matter up? I am sure it would meet with a great deal of support, would greatly benefit the retail trade, and would be extremely disagreeable to unscrupulous opponents.

We hope to do something in this way locally in the near future by means of our own Association, and prove that, although believers in the objects of the P.A.T.A., we are not necessarily sluggards or going to be handicapped in our actions and scope for business, but rather able to take active and collective measures to oppose those who neglect the interests of the retail trade. Yours truly,

December 28, 1896.

CHARLES J. PARK.

Mr. Morgan W. James (Llaunely) writes earnestly urging chemists to join the P.A.T.A., and suggesting what great things could be done with a combination of eight or ten thousand.

Mr. S. N. Pickard (Bradford) writes to the same effect. The arguments in these letters are the same as have been frequently urged.

Substitution.

SIR,—There has been much said and written lately about “substitution” and the criminality of chemists who endeavour to sell their specialities, of which they know something, in place of the specialities of others of which they knew nothing, and the much-maligned chemist is taxed with greed and dishonesty. I should like to reverse the matter and say that the proprietors of these “only cures” are themselves doubly guilty of this greed and criminality, in that they substitute for the knowledge and skill of the educated chemist and druggist the puffing and exaggeration which alone make their commodities sell. The Charles A. Vogeler Company, for instance, makes this astounding declaration: “The woman who has lost her figure will get a beautiful new one by taking Vogeler's curative compound”! After this will anyone try to push its sale, especially as that company has lately been trying its level best to insult us chemists?

For the last thirty years I have felt it my duty, as far as possible, to substitute, and have not willingly sold a single proprietary medicine, and I will state the results of this line of action. I bought a business west of Charing Cross, where, when I went, the first month's takings were 3*l.* 18*s.* weekly; when I left they were more than 12*l.* weekly. I bought another east of Bow. There my first month's average (weekly) was 4*l.* 8*s.*, my second month 4*l.* 8*s.* 8*d.*, my last month, after nine years, was a weekly average of over 11*l.* At seventy years of age I took my present business, in which my first month was under 3*l.* In three years it has doubled, and probably, had I not suffered much from an ulcer in my foot, would have been more than doubled. Some of this may be owing to a constant perusal of your valuable journal, which I have taken from its very babyhood. Is it any wonder that I have a firm conviction that the chemist and druggist who willingly pushes sale of the “patents” is not so helpful to his customers as he ought to be, nor so careful as he might be of his own interest?

December 28.

G. E. B. (263/60.)

The Dr. Scott's Pill Memorial.

SIR,—Mr. William Day judges us by his own standard of wisdom, by thinking that we should have been foolish enough "to deluge the signatories with the praises of the one panacea for all the ills that flesh is heir to." What use, when they already know by experience?—for according to him they are habitual purchasers of our medicine. If all the signatories are genuine purchasers of our pills, why did not Mr. Day send the addresses? Surely those who added them intended that they should reach us, and those who did not left them out. We did not ask Mr. Day to get up a memorial; but when started, we claim that both signatures and addresses were morally, if not legally, our property. We know cases in which purchasers of other articles were asked to sign. We are not spending a lot of money in advertising. We simply substituted new matter for old. Our advertising this year is less by a few pounds than last, and we do not propose to increase it. Of course we quite understand that Mr. Day might not like us to explain our position to his customers and ours. The interest that the public really take in the matter will be proved by the number of addresses which we receive in response to our invitation for them.

Yours truly,

December 29.

W. LAMBERT & Co.

A Gloomy Outlook.

SIR,—After a careful perusal of your excellent review of the physic trade, I conclude that much remains to be said for the guidance of those hopefully embarking.

I have always felt that chemists have been humbugged by both the public and doctors, for having satisfied the demand for a higher standard, there has been a steady commercial decline. It is evident that the public are not prepared to pay for much culture, and we are not accorded any higher position as sellers of drugs than our neighbours of other trades.

There are many factors working perhaps for the good of mankind, but certainly not likely to benefit chemists, such as sanitary education, temperance, skilled cooking, wiser habits and dress, better homes, outdoor recreations. For what medical men have done we give them full credit, but their patronage certainly becomes of less value to the local chemist, and they lean much to the side of hospitals, charity aids, and drug-stores. And things will get tighter, for as medicine is provided it will not be necessary to compound specially for each case; stock compounds and proprietaries will be in greater favour, so the aid of a compounder will not be in such great request.

Drug and sundry houses are laying out to intercept the doctor on the old path to the pharmacy, and between us and our real customer are grocer and draper, and, greatest of all, company traders. All these tend to reduce the value of small businesses and restrict the chance of young men, and I also fear that a scientific training rather unfits one for a pushing, quick counter-trade.

Yours obediently,

DRUGGIST (1/51.)

The Purity-tests of Otto of Rose.

SIR,—In your comments on otto-of-rose testing in your issue of December 26, 1896, page 931, you say: "Mr. Conroy's assertion that the nose is as good as chemical tests for ascertaining whether an essential oil is mixed with other oils or not is in sympathy with old-fashioned ideas; but he is, we believe, too good a chemist to dispute the importance and value of chemical tests for essential oils." This, Sir, you will kindly allow me to point out, is very wide of the mark, and quite misrepresents my views.

In the first place, the tests referred to in my paper were not chemical tests at all. They were simply the physical tests of specific gravity, freezing-point, and optical rotation. Secondly, my paper referred to otto of rose alone, and not to essential oils generally. I have a good deal of confidence in chemical tests for essential oils generally, and also some confidence in the physical tests, but not in the case of otto of rose, for reasons fully explained in my paper.

There is another point in this comment which I cannot agree with. You say: "So far nothing but pure otto can

pass the four specific tests—viz., density, freezing-factor, optical rotation, and alcoholic percentage. Mixtures of otto and geranium can be produced to pass two or three of these tests, but not four." Now, Sir, I think I can show you that this fourth test is quite as much a "will-o'-the-wisp" as the other three commented upon in my paper.

It is well known that the percentage of stearoptene varies in different samples of genuine otto, hence it follows that the alcoholic constituents must also vary. Mr. J. C. Umney, who fixes very narrow limits for genuine otto, gives an alcoholic percentage of 71 to 72.5, and for Turkish geranium oil an alcohol percentage of 85. This works out by alligation as follows:—

	72.5	
71		85
12.5		1.5

This shows that 12.5 parts of otto may have added to it 1.5 part of geranium oil and still be within the range of 71 to 72.5. This is equal to an admixture of 10.7 per cent. of geranium oil; and it should be borne in mind that in this I have taken the narrowest limits. Ottos of rose with a larger percentage of stearoptene would take considerably more geranium oil; and, further, the test could be easily circumvented by adding a small percentage of some non-alcoholic body, such as citrene. In my paper, in this letter, and in a previous letter, I have shown that geranium oil may be added in the following proportions to otto, and the mixture still be within the constants given:—

	Pure Otto.	Turkish Geranium.	Can be adulterated with this geranium to the extent of
Freezing-point	65° to 68° F.	—	11 %
Specific gravity at 88° F. ..	.850 to .856	.888	15.8 %
Optical rotation	-2.3° to -2.7°	-0.33°	31.5 %
Alcoholic percentage ..	71 to 72.5 %	85 %	10.7 %

Now, it is evident that if a mixture be made containing not more than the lowest figure given above—viz., 10.7 per cent. of geranium oil—such a mixture will be within the limits of these four tests. I think that these figures completely prove that my view of these tests is the correct one, and that the nose is, after all, a better test than these four taken together, since it would detect the adulterant before the percentages allowed by these limits were reached.

Liverpool, December 29, 1896.

M. CONROY.

Another Warning.

SIR,—May we ask if you will kindly add another warning to those which have already appeared in your columns?

We understand that some person is representing himself as "George Raimès"—ostensibly of our firm—and carrying out the usual plan of placing an order and then endeavouring to borrow money. We know of one case in which it was done successfully. We shall be glad if you will kindly make it known that there is no George Raimès connected with our firm; that no one has authority to order goods on our account; and that for all orders sent direct cards or forms bearing our name are alone used. The individual in question is about 5 feet 9 in. inches height, light hair and moustache, on beard, stoutly built. He gives the impression that he is a Lancashire man, and is evidently well acquainted with the wholesale trade. We are, yours faithfully,

RAIMES & Co.

Proprietors and Chemists.

SIR,—Referring to your correspondent's letter *re* Mr. Congreve, I have experienced precisely the same thing, and I think it is a grievance one should ventilate through the columns of your journal. "H. G. S." says manufacturers should not supply the public at a cheaper rate than they charge the retailer. I go further, and say they should not supply them at all, but refer them to their chemists who stock them, or would, at any rate, obtain them for their customers.

Cardiff, December 29, 1896.

R. PRUST.

Assistants in India.

SIR,—A word or two may perhaps be advantageously added to the statements made in the letter of "Another View of the Case" in your issue of October 3, which reached India at the beginning of this week.

It is a matter for regret that there is a possibility of interest quite dying away in the necessarily long interval which must elapse between the broaching of a subject in your columns and the appearance of any comment from readers removed by several weeks from England. Perhaps the worst effect of this physical difficulty is that it probably operates upon men here by disinclining them to take part in the discussion of matters of common interest to the craft, which may be carried on in THE CHEMIST AND DRUGGIST.

It appears to be necessary to point out the danger of generalising about the condition of things in India from an experience of one or two (or even perhaps three or four) of its cities or stations. "Another View of the Case" has, probably unconsciously, fallen into this error, and in consequence his statements are often misleading.

"In India," he says, "the hours are from 9 A.M. till 6.30 or 7 P.M., Saturdays 9 A.M. till 2 P.M., and Sundays off duty." And again, "In India an assistant (junior) starts on an average salary of 170r. a month . . . and has also furnished apartments found, and one tax only to pay—viz., 3 per cent income tax." These statements represent, of course, your correspondent's experience of such parts of India as he knows; but one individual's experience, however wide, forms an unsound basis for making generalised assertions about things in a continent like India, lying under 25° of latitude and as many of longitude.

Hence it comes about that the statements of those who during the past two years have so confidently asserted in your pages what happens "in India" (including the latest of October 3) coincide in few particulars with my short experience in this part of the Deccan, and I have no doubt there are other parts of India where the conditions of life and work vary as much from mine as the latter do from those of "Another View of the Case," for instance.

I do not class myself with "One of the Disappointed Ones," because I came out to India without any rose coloured expectations and from motives somewhat different from those which seem to be chiefly recognised by your correspondents. I have already hinted at what is one of the severest privations which in my experience is suffered by the resident in an up-country station—viz., the absence of all artistic and intellectual movement.

It is scarcely possible, and perhaps not desirable, to enlarge upon this point in these pages, but it may be worth remembering that not the least weighty of the disadvantages of a post in a mofussil station may be largely psychical in nature.

The communication of "Another View of the Case" may be dismissed with the question whether he really believes faithful service of an employer to be incompatible with the recognition of the possible disadvantages of the assistant's life in India? The spirit of this last paragraph of your correspondent's letter is not prepossessing, and he lays himself open to the ugly charge of making gratuitous and unjust insinuations under the shelter of a *nom de plume*.

Your own comment on the letter I have referred to suggests a good deal of writing, but an exhaustive treatment of the subject would occupy too much space and time. Shortly, the whole case may be summed up in the trite observation that life in all aspects and everywhere has its advantages and disadvantages, and that the relative proportions they assume in the mind depend largely upon each individual. It is undoubtedly possible to lead a contented and useful life in India as a chemist's assistant, but the intending emigrant must not expect that he will leave the disagreeables of business and life behind him in England, and necessarily step into something simultaneously more remunerative and more agreeable here. And it is because there has seemed to be a tendency to encourage an unwise optimism of this kind that these lines have been written.

Yours truly,

J. GRANTLEY TINGLE.

Decunderabad, Deccan,
October 22.

An American Correction.

["The *Queen* says that women chemists are increasing in New York, for, in addition to the numbers who study pharmacy at college, there is a law that if a woman has compounded drugs under her husband or father, she has a right to a diploma from the Board of Pharmacy in case of his death or permanent disability. Is this so?"—From THE CHEMIST AND DRUGGIST, October 31, 1896.]

SIR,—No; this is not so. In other words, to be more forcible than diplomatic, it is a lie. In New York, as in London, there are editors of the "man-slaying" variety, and these do not confine themselves to the writing of recipes (known by them as "receipts"). When the New York State pharmacy law was enacted in 1884, it provided that certain druggists already in business could be licensed without examination, by making proper application, &c., within a specified time. At the expiration of this time some, who had been entitled to such registration, had failed to avail themselves of the provision made in their behalf. At a subsequent Session of the State Legislature more time was given these delinquents, and at the expiration of that time there were still some tardy ones. Last winter a member of the Legislature, named Costello, introduced and secured the passage of a Bill which bears his name, indefinitely extending the time in which those who were entitled to registration in 1884 may register. In order for a candidate for registration under the Costello law to secure his papers he must obtain an order from the Supreme Court sitting in the district in which he does business, directing the State Board of Pharmacy (not the New York City, Brooklyn, or Erie County Boards) to grant him or her a licence.

The widow of a druggist, who was herself entitled to registration under the law, in order to be allowed to continue her deceased husband's business, applied to the Supreme Court for the order referred to, and got it. Thereupon some of our "man-slaying" daily papers put into circulation the lie which you found in the *Queen*, and it has been copied in about every State of the Union, and appears to be now "doing" Europe.

Yours very truly, for the better dissemination of truth and intelligence,

FRANCIS B. HAYS.

330 West 29th Street, New York,

Pharmaceutical Trade-union Disputes in France.

We have received a letter from the Council of the Chemists' Assistants' Trade-union of France (*Association Syndicale des Elèves en Pharmacie de France*) controverting statements recently made to our Paris correspondent by M. Cantenot (*C. & D.* xlix., 479), who, with M. Saforcada, has seceded from the Association and is forming a rival organisation. The letter, which is much too long for insertion, disclaims any systematic hostility on the part of Comrade Jocelyn Robert, President of the A.S.E.P.F., against employers as a body. On the contrary, we are told, Comrade Robert's voice has always been on the side of moderation, even in the early days of the trade-union, when M. Cantenot and his "satellite," M. Saforcada, who now pose as the employers' friends, were extremists of the most gory type, and proposed to placard Paris with "posters of vengeance, holding up to public scorn those pharmacians who declined to close at 9 P.M." The real reason of the Cantenot-Saforcada secession, says our correspondents, is that when the Society started its organ, *Pharmacie Laborieuse*, these two gentlemen were excluded from the editorial bureau by reason of their unslakable thirst for the blood of the employer-class. Disappointed, they turned traitors, and, after much secret negotiating with enemies of that union, suddenly sent in their resignations. These resignations were not accepted, but the malcontents were solemnly expelled the union. (*Execution en règle*.)

As for the alleged hostility of M. Riethe, President of the Paris Syndicate of Pharmacists, to the union, that is quite imaginary. Between the union and M. Riethe there is the greatest goodwill; that gentleman received Comrade Jocelyn Robert quite cordially, when the latter, in the name of his union, came to ask for an early-closing night to enable his unionists to see the Tzar-fetes—a request which was readily complied with by M. Riethe's Association. The union, our

correspondents proceed, has never been guilty of tyranny towards its members. Such conduct, moreover, would be impossible, as the committee are elected by universal suffrage, and would be quickly sent about their business if they misbehaved. It is impossible for the union to extend the hand of friendship to men who have treated them as MM. Cantenot and Saforcada have done; but we gather that those gentlemen would not find the door of repentance closed against them were they to cry *peccavimus* and appeal for readmission into the bosom of the union. In the desire to further this peacemaking process we refrain from printing the elaborate adjectives qualificative of MM. Cantenot and Saforcada, with which our correspondents' letter is interlarded.

That Boy!

A *Subscriber in Wales* (101/31) solicits our sympathy, which we gladly extend to him. He has an employé, aged 18, educated according to national standards, who wrote the subjoined memorandum of returns. We also sympathise with the firms who received the empties:—"2 casks pill evens 1 Tub the carbonic gas company 2 hamper in 1 coal dust and harding Bristol 2 hamper in 1 maw son Tomson london 1 hamper Battery and Wats."

The Irish Examinations.

SIR,—At the last Licence examination a candidate was rejected who took between 60 and 70 per cent. of marks; the minimum requirement lies somewhere between 50 and 60 per cent. Will the Registrar deny that there were not candidates passed at the examination referred to who took fewer marks than the student referred to above? I trow not. And what examination would reject a candidate taking between 60 and 70 per cent.?

The advent of 1897 will probably see the mooted prize-fund in connection with the "Irish Final" put into operation. Might I suggest to the Council—

(a) The advisability of adding book prizes to the medals proposed, such as "Pharmacographia," Remington's "Pharmacy," &c. I am sure such would encourage post-graduate study.

(b) Could the Irish Council not induce the English to open their "Jacob Bell Memorial Scholarships" and the "Herbarium Prize" to Irish students?

(c) The Council in Ireland ought to recognise attendance at a few good English and Scotch schools of pharmacy, as there is not adequate tuition at present in any of the Irish schools so far recognised. It is high time for discarding the stereotyped formula, "We are not recognising any more schools at present."

(d) *Materia medica* and botany, as also pharmacy and dispensing, ought to be divorced as regards examiners for obvious reasons. The Great Britain examination in this respect is worthy of imitation. The examiners' fee could be reduced to 7s. 6d.; this would obviate the difficulty raised on appointing two new examiners.

Yours sincerely,

Linenopolis.

VIM ET VERVE. (248/22.)

Mr. Robottom in Praise of Borax

SIR,—Permit me to say, in answer to the remarks in your issue of December 19 in reference to the use of boric acid as a preservative, that many medical and scientific men know very little about this article. I have used borax and boracic acid for over forty years, and I have taken about three pieces the size of a pea of borax-crystals a day and I have never been ill or suffered pain of any kind. We use borax at home in the tea and in the milk, and place a piece of cloth that has been soaked in strong borax-water on the butter, which is thereby kept good for weeks. I prefer the pure borax for all preserving purposes to boracic acid. For cuts, sores, burns, scalds, the bite of a dog, cat, or snake, and many other uses, no product can be compared with boracic acid. I have given this away to many hundreds of people, and received the thanks of many, and must have used it as a gargle, and I have never heard any but good reports of it. Boracic acid is likely to become very cheap,

and will be of great use to the poor people when better known.

Yours, &c.,
Commercial Sale Rooms,
Mincing Lane, E.C.,
December 22.

ARTHUR ROBOTOM.

Co-operation: a Remedy for Low Prices.

SIR,—Several of your correspondents, including Mr. Reid last week, have referred to my scheme, as printed in *THE CHEMIST AND DRUGGIST*, about the middle of last April. That scheme was very comprehensive, and perhaps it would be advisable to start with one department only at first (*viz.*, proprietaries), to gain the confidence of the trade. These (which need not necessarily take the place of those the chemist already has, but rather supplement them) would soon come into general demand, instead of the profitless "patents," because they would be pushed by the whole of the subscribers.

To put this effectually before the trade, 100% as a guarantee for initial expenses is required, 30% of which has been already promised me. A copy of my full scheme may be had on application, and I shall be glad to receive the name of any chemist wishing to subscribe to the initial fund, and also the names of those willing to support the company when formed. A few names of men influential in pharmacy, and willing to support the scheme, would be especially esteemed.

G. T. COOPER.

95 Waller Road, New Cross Gate, S.E.,
December 20.

Competing with Unprofitable Proprietaries.

SIR,—Mr. Foulston makes an excellent suggestion, and one which indicates the true solution of the patent and proprietary question. There is no reason why chemists should not combine to put up a "reliable" emulsion, pill, curative syrup, &c. At present each pushes his own; but if we had chemists everywhere pushing the same emulsion, &c., success would be assured, and we could leave the presently-advertised nostrums to grocers, drapers, and stores.

Yours faithfully,

X. Y. Z. (243/31.)

A Voice from the Bush.

A *Queensland Chemist*, in a recent letter, says:—"THE CHEMIST AND DRUGGIST affords me great pleasure and instruction, being one of the best papers that anybody ever had. Its reading matter embraces such a variety of subjects, other business people have, on seeing the *C. & D.*, been put on to the right path to find a good English house to do business with, although we have also in Queensland two good wholesale houses, besides being worried by Sydney firms for business.

"Here the class of business for a bush town is rather good. In perfumery, Roger & Gallet's, P. & L.'s, Gosnell's, Colgate's, and the best makers find the best sale; in soaps, Vinolia, Cashmere, Cuticura, and carbolic sell best; but as seems to be the case in England, the stores cut the trade to a very great extent."

DISPENSING NOTES.

Correspondents should consult "The Art of Dispensing" in regard to dispensing difficulties. Difficulties not explained therein may be sent to the Editor, who invites a general expression of opinion upon the under-mentioned topics.

Ergotin Pills.

SIR,—Will you tell me the best way to dispense the following pills, and also if the method which I used is permissible:—

Ergotine	gr. iv.
Argent. oxid.	gr. ½
Mice panis	q.s.
Fiat pilula. Mitte tales xij.	

I dispensed them by evaporating the ergotin to half, adding the argent. ox. and massing with pulv. tragac. The pills were all right when made, but after standing a while

they commenced to swell, and were quite semi-fluid and frothy. I then put the whole lot into an evaporating basin, and almost dried. Then I placed them in a mortar (warmed) and massed quickly, turning out very fair pills, which did not swell or deliquesce. I should like to know if there is any better method of making them, and whether an examiner would turn me out for making them as I did.

I remain, Yours faithfully,

BONJEAN. (240/57)

[The plan which we adopt in cases like this is to evaporate the ergotin after mixing with each 5 gr. of it 1 gr. of a mixture of pulv. tragacanth 1 part, and pulv. glycyrrhiz. 9 parts. In the above case the ergotin and powder (10 gr.) for twelve pills should be evaporated to 45 gr. (or less according to its constituency, for ergotin is variable) and massed with the silver oxide and liquorice-powder. It is a mistake to use pure tragacanth to mass watery substances, because swelling invariably takes place, as in the above instance.]

Clear or Cloudy.

212/74. *Calumba* gets the following mixture sometimes clear and sometimes cloudy, using different specimens of aluminium chloride, and wants an explanation:—

Aluminium chloridi	gr. 48
Liq. glonoin (1 per cent)	℥viiij.
Mucilaginis	℥ij.
Aq. ad	℥viij.

M. ft. mist.

[The medicinal chloride of aluminium is a white deliquescent powder, and dissolves clear in water. The presence of a little oxychloride of aluminium would account for a cloudy mixture. Such a sample should, of course, not be used in medicine.]

A Thick Mixture.

SIR,—Could you kindly inform me the best mode to dispense the following, and what appearance it should present?—

Piperazine	gr. x.
Phenocoll. mur.	gr. x.
Glycerini	℥j.
Inf. rhei	℥ij.
Tr. nuc. vom.	℥ij.
Aq. m. pip. ad	℥ss.

Bis die p.c. Mitte ℥xij.

Yours faithfully,

PHENOCOLL. (230/34.)

[As written the above makes, owing to interaction of the piperazine and the phenocoll. mur., and consequent precipitation, a mixture too thick to be poured out of the bottle. Make each dose up to an ounce with water, amending the directions accordingly, and making a note on the prescription.]

An Emulsion Difficulty.

251/7. *Caustic* has tried, by many ways of mixing, to form a stable emulsion of the following, but without success:—

Ol. olive	℥x.
Liq. calcis	℥x.
Pulv. amyli	℥ii.
Pulv. zinci oxid.	℥ij.
Calc. carb. præcip.	℥ij.

℥i. lotio.

[We find that by using 5 oz. liq. calcis sacch. in place of half the liq. calcis a permanent emulsion results. "Caustic" had better obtain the prescriber's sanction for this improvement if he is a local man.]

234/56. *H. B. S.*—"P. opii gr. j." would be taken to mean a pill containing 1 gr. of opium; and the fact that you found it to mean pulv. opii gr. j. is worth putting on record.

LEGAL QUERIES.

250/3. *Liqueur*.—Manufacturers of liqueurs must hold a compounder's licence, 10*l.* 10*s.* per annum.

254/6. *M. & L.*—Neither turpentine nor methylated spirit comes within the definition of petroleum to which the Act applies.

251/10. *A. W. N.*—The fact that the manufacturers supplied you with the wrong kind of methylated spirit does not relieve you from responsibility in selling it. But probably if explained to Board of Inland Revenue they will be lenient.

253/37. *Syntax* asks whether a deed of partnership between a qualified and an unqualified person to carry on a chemist's business can be a valid document. [The rights *inter se* of a qualified and an unqualified man carrying on the business of a chemist and druggist have never, so far as we know, been the subject of a judicial decision. The point was raised in another form before Judge Lumley Smith with reference to the sale of some toilet-preparations, and that gentleman hinted as his opinion, that where a person was contravening the Pharmacy Acts he was in the same position as a person under the Gaming Act, and had no *locus standi* in court. The question was recently brought before an eminent counsel in the course of conversation, but not formally. That gentleman gave it as his view of the matter, without looking carefully into it, that an agreement between a qualified and an unqualified man to carry on a chemist's business would probably be held void, as being an agreement to do something which was rendered illegal by statute. The matter, however, is not at all free from doubt, and it would be a good thing if a judicial decision could be obtained on the subject.]

253/69. *H. W.* has an outdoor apprentice who will not come to time in the morning. His parents seem careless in the matter. Can he be dismissed for disobedience? An apprentice, being an infant, is allowed a great deal of latitude by the Courts, and it is very doubtful whether they would assist in such a case in any way. Every properly-drawn deed of apprenticeship ought to define the hours of attendance and contain a power to dismiss the apprentice, but not one deed in a hundred contains either one or the other. In the absence of such power the apprentice can only be dismissed for very flagrant misconduct. Even if such power were expressly given, we do not think you would be justified in dismissing your apprentice for the reasons stated. If the case came into Court the question would doubtless be raised whether it was part of the apprentice's duty to open the shop under such circumstances. Nor do we think the master would be justified in detaining the apprentice after the expiration of the term of apprenticeship to make up for the lost time. The deed may be so worded that the father may be sued in damages, and in that case he would possibly give the matter more attention. The probability is that the fault lies with the domestic arrangements of the parents.]

257/56. *R.* says that some cutters buy the $\frac{1}{2}$ -lb. bottles of Fellows's Syrup, supplied for dispensing at 2*s.* 4*d.*, put a 3*d.* stamp on, and sell the article for 2*s.* 9*d.* If this bottle is supplied stamped, it bears a 6*d.* stamp, is charged 2*s.* 10*d.*, and is marked to sell at 4*s.* "R" asks if there is anything illegal in doing what he says the cutters do. There can be nothing illegal from a revenue point of view. The revenue only requires a 3*d.* stamp to be added if the price at which the article is vended does not exceed 2*s.* 6*d.* Unless the Fellows Company, therefore, make any contract with purchasers of their unstamped bottles forbidding them to treat them so, the proceeding is quite in order.

246/90. *M. P. S.*—Witnesses.—County court allowances are as follows:—Gentlemen, merchants, bankers, or professional men, *per diem* from 15*s.* to 21*s.*; tradesmen, &c., from 7*s.* 6*d.* to 15*s.*; a chemist would only be entitled to from 7*s.* 6*d.* to 15*s.*, according to the length of time occupied at the court, *plus* travelling expenses at the rate of 6*d.* per mile one way. A witness called as an expert is allowed 1*l.* 1*s.* to 2*l.* 2*s.* for attendance, and 1*l.* 1*s.* to 3*l.* 3*s.* for qualifying—that is, for work done in preparing to give evidence. But this only applies when the amount in dispute is over 20*l.* In police courts Magistrates fix the remuneration of witnesses, and there is no appeal from their decision. A chemist was engaged by a superintendent of police to analyse some meat for strychnia. He found the strychnia and attended court. He claimed 3*l.* 3*s.* for the analysis and 10*s.* 6*d.* for attendance. The Magistrate allowed 2*l.* 2*s.* inclusive, and refused to allow more.

263/33. *E. R.*—We are not aware whether the registered druggist's certificate (Ireland) has ever been officially recognised in any part of the United States. Pharmaceutical licentiates (Ireland) can be registered in about twenty of the States, which are named on page 164 of the Calendar. These do not include the most populous, such as New York, Pennsylvania, Massachusetts, Illinois.

2,24. *Anxious.*—You had a claim for a month's salary in lieu of notice from your previous employer; but you have probably sacrificed that to the extent of the time you stayed on with the new proprietor of the business.

262 18. *Easton.*—Retail wine-licences are cheaper in Scotland than in England and Ireland. The Act which deprives magistrates of a discretionary power in certifying for these licences does not apply to Scotland. We have often reported the granting of wine licences to Scotch chemists.

260 49. *S.*—It is not an offence under the Pharmacy Act, but it may be one under the Sale of Food and Drugs Act, or under the Merchandise Marks Act, to sell paregoric without opium.

263/31. *R. R.*—The name on the label of any poison should be the name under which the business is conducted. That is at all events the system which has been followed for many years without any objection. If the trader is a company, it is the company's title which should appear, not that of the qualified assistant. [In this connection we may state that the paragraph on page 492 of the *C. & D. DIARY*, 1897, is incorrect.]

259/58. *Scales.*—It is one of the Board of Trade's model regulations that every new weighing-instrument is to have the manufacturer's name and its maximum load marked upon it. These regulations have, no doubt, been adopted by your local authority, and, if so, have the force of law.

MISCELLANEOUS INQUIRIES.

We reply to our subscribers and their employés only; queries must, therefore, be authenticated by the name and address of the subscriber. When more than one query is sent write each on a separate piece of paper. When a sample accompanies a query full particulars regarding the origin and use of the sample must be given, and the name of the querist should be placed on the sample. Queries are not replied to by post.

230/66. *M. F. V. (Santa Monica).*—Geoline.—We thank you for your information regarding this article, which we have supplied to the inquirer.

248/59. *Iodide.*—Books on Manufacturing-chemistry.—Good works dealing with chemical industries generally, and giving illustrations of plant as well as descriptions of processes, are neither common nor cheap. The best book on the whole is "A Dictionary of Applied Chemistry," by Dr. T. E. Thorpe, 3 vols., published by Longmans & Co. at 7l. 7s. All the more important industries are dealt with in these volumes by specialists in the industries. Separate industries are well treated in such works as Lunge's on the alkali industry (Gurney & Jackson); Groves and Thorpe's "Chemical Technology" (fuel, &c.), published by Churchill; and the small technological handbooks published by the last-mentioned firm at 6s. to 7s. 6d. each. For illustrated descriptions of chemical plant see Parnicke's "Maschinellen Hilfsmittel der Chemischen Fabrik," published (in German) by H. Bechhold, of Frankfurt.

248/58. *Quirey.*—(1) Silicate Paint.—We have no formula for this. (2) Lac Bismuthi.—This is a preparation made by Symes & Co. (Limited), Liverpool. (3) We cannot explain your failure, since you give us no details.

248/68. *Vimol.*—Tobacco-manufacturing.—We are not able to say what capital is required to start a business sufficient to keep a traveller going; but as the greatest outlay is on the duty you should have little difficulty in calculating how much you will require to keep him going, without reckoning profit for yourself. We imagine that 50% to 100% a week for duty would alone be required, and if you give

three months' credit, your capital for that and working-expenses should not be short of 1,000%. There will not be much of a living in that either. We know businesses employing one traveller, between twenty and thirty workers, and 10,000% of capital, with a cigar department to supplement the manufactured-tobacco trade, which yield a fair profit, but we should think you would need a lot of patience in these days of keen competition to make a business like those.

248/32. *Chemicus.*—Ohare.—We fancy that this is a perversion of "ochre," and that it is some particular kind of ochre used for colouring brown paper that is meant. We have not heard of the substance before, and can find no reference to it.

248/55. *Hypo.*—(1) Laundry-blue.—See page 633 of vol. xlix. (2) Yes.

252/35. *W. K. T.*—(1) Cough-mixture:—

Mucil. tragacanth.	..	..	..	..	3j.
Spt. æther. nit.	..	..	..	..	3ss.
Oxymel. scillæ	..	..	..	..	3ss.
Vin. ipecac.	..	..	..	..	3ss.
Acet. scillæ	..	..	..	..	3i.
Liq. morph. hyd.	..	..	..	..	5ss.
Aq. chlorof. ad	..	..	..	..	3iv.

M.

DOSE.—For adults, two teaspoonfuls; 10 to 15 years, one teaspoonful; 5 to 10 years, half a teaspoonful, three times a day, or when cough is most troublesome.

Our correspondent asks if the above is perfectly safe and efficient to put up as a proprietary speciality. We do not think it good enough, and it violates an accepted therapeutic principle—viz., that morphine should not be given with bronchial stimulants, which ipecacuanha and squill are. The latter appear to act beneficially by creating such an exudation of fluid into the bronchial vessels that the accumulation causes coughing and the vessels are thereby cleared out. This being continued for some time, Nature soon effects a cure. Morphine and opium have exactly the opposite effect, and in bronchitis they are positively harmful. The dose in the above cannot, however, do much harm nor any good. The formula would be improved by using mucil. acaciæ 3ss. instead of the tragacanth, and putting in spt. æther. nit. 3ij. and vin. ipecac. 3iss. Omit the acet. scillæ and replace the morphia by tr. belladonnæ mx.

(2) Neuralgic Mixture.—Is the following perfectly safe and efficient?—

Quinæ sulph.	..	..	..	..	gr. xij.
Acid. hydrobrom. dil.	..	..	..	..	3ij.
Tr. gelsemii	..	..	..	..	3i.
Aq. chloroformi ad	..	..	..	..	3iv.

DOSE.—For adults, one tablespoonful; 10 to 15 years, two teaspoonfuls; 5 to 10 years, one teaspoonful, every three hours, till the pain is relieved. This medicine is not intended for children under 5 years of age.

[For adults, yes; but gelsemium should not be given to persons under 15 years of age, who, indeed, do not require it. Even for adults there is a limit to the dosage. We have seen cases in which poisonous symptoms have supervened when 20 and 30 minims of the tincture has been taken in three doses. The above will be safe if the directions are made to read:—

DOSE.—For adults, a small tablespoonful to be taken in as much water, and to be repeated twice, if necessary, at intervals of three hours.]

253/42. *E. K. J.*—Cough-linctus.—We are asked for our opinion of the following:—

Codeinæ	..	..	..	..	gr. j.
Acid. hydrobrom. dil.	..	..	..	..	3j.
Tr. cubebæ	..	..	..	..	3j.
Spt. chloroformi	..	..	..	..	3j.
Ess. amygdal. amar.	..	..	..	..	qs. (to flavour)
Syr. pruni virg.	..	..	..	..	3ss.
Syr. piceis ad..	..	..	..	..	3ij.

M.S.A.

Dose: A teaspoonful when the cough is troublesome.

The cubebæ and Virginian prune might be omitted for all the good they do, but they help to give the linctus "character." Otherwise the preparation is a good one, but would be better if acet. ipecac. 3iss. took the place of tr. cubebæ 3j.

239/49. *Subscriber* (Turin).—You will find a method of making Glycerophosphates in our 1897 DIARY, page 274. and in our issue of May 26, 1896, page 749, there is a formula for a compound syrup of the glycerophosphates. The plain syrups are made 5 gr. to the teaspoonful with a mixture of simple syrup and syrup of orange-flowers.

28/96. *Anxious*.—How to prevent warts under the skin following the administration of potassium bromide for epilepsy.—Try 20 gr. of Epsom salts morning and evening.

239/39. *South Atlantic* sends us the formula from which, in a warm climate, he brews Hop-beer. It is as follows:—

Hops	1 oz.
Brown brewing-sugar	8 oz.
Conc. infusion of orange	3ij.
Tincture of capsicum	15 minims
Yeast (fresh)	1 oz.
Salicylic acid	15 gr.
Water	Cong. j.

Boil hops and sugar with water one and a half hour. Add yeast, ferment two or three days, and bottle.

It is a good formula, but the trouble is that the beer begins to ferment after it has been in bottle a week or ten days. Our correspondent is in a tropical country. To prevent the fermentation use only 1 oz. of yeast to 10 gallons of the brew; ferment in the open air for twelve hours, then strain through felt bags, add 1 dr. of sodium metasilphite to each 10 gallons, and bottle.

238/71. *W. T.*—(1) Household Ammonia.—See pages 574 and 700 of the last volume. (2) Sulphur Skin-action:—

Glycerini	3ss.
Acid. sulphur.	3ij.
Lac sulphur.	gr. xij.
Aq. rose ad	3iv.

M.

244/46. *Acetum*.—The heading for brewed drinks is a liquid extract of quillaia made with a mixture of S.V.R. 1 part and water 2 parts. It is made various strengths, but 1-in-4 is safe. Glucose or saccharum is used to thicken it, and sometimes caramel to give it a dark colour. Formalin vapour on the top of liquids preserves them better than when put into the liquids. See the paper on the subject by Mr. F. C. J. Bird in the *C. & D.* of August 2.

245/41. *Cantab.*—(1) Granular Floor-polish is not made with spermaceti and French chalk, but is a mixture of paraffin wax 1 part and powdered boric acid 3 parts. (2) It will not pay you to decolorise the turpentine. It can be done quickest and best by distillation.

245/1. *C. D. H.*—Creme d'Amandes is a soft soap called Naples soap, which it cannot possibly pay you to make in small quantities. You can buy it at 10d. or 1s. per lb. from your wholesale house. It is generally sent out unscented, and from it you can make the superior cream described in the *C. & D.*, November 2, 1895, page 679.

245/39. *R. C. T.*—We could not have recognised the article.

245/17. *Malus*.—The Cider-preservative is most probably solution of calcium bisulphite (which you can easily tell by the smell). If it has an acetic odour it is probably a solution of salicylic acid in potassium acetate and water. You can tell by the violet reaction with liq. ferri perchlor.

156/17. *Rhei*.—You will find the information which you want in the 1897 DIARY, pages 275 and 491.

241/1. *Yorks*—(1) Egg-yolk for birds' food is the hard-boiled yolk mixed with flour and a preservative such as salicylic acid. (2) Tasteless cayenne is only used during the summer months. It is considered inadvisable to give it as a general food.

242/14. *Delta*.—The transparent Hair restorer continues to deposit lead sulphide while it is exposed to the light. It is upon that that its action depends. We prefer the free-

sulphur lotion, and are not surprised to hear that you have had indications that it is better.

243/27. *Salopian*.—We do not see how you can make the mixture without the addition of an emulsifying-agent. See the 1897 DIARY, page 266.

247/16. *Verax*.—Green's "Structural Botany" is well adapted for the Minor. It is a new edition of Bentley's, published by Churchill.

246/17. *H. B. L.*—Thanks.

247/17. *Saliva*.—We cannot possibly say what your customer means. Is he all right in the upper storey, think you?

347/22. *Wales*.—Hashisch, which your customer wants is a special preparation of cannabis indica made in India. We do not think it is obtainable in this country; but if anyone can supply it and replies to this we will let you know.

264/71. *L. G. G.*—Ionone is a synthetic violet perfume, and is obtainable only in 10-per-cent. solution. It is the basis of Parma-violet perfume.

247/57. *W. S. C.*—You will find a formula for Indian cerate in the DIARY.

235/30. *A. B. S.*—Thanks. It is probably the second ringworm application that "W. K. T." meant.

178/21. *Dubitat*.—(1) To make Homœopathic Pilules, 3x, the unmedicated pilules are put in a bottle, and sufficient of the 3x tincture poured upon them to saturate them. The tincture must be in alcoholic strength at least 20 o.p. After the pilules are saturated they are dried in the air. (2) You will find on pages 482 and 483 of THE CHEMISTS' AND DRUGGISTS' DIARY, 1897, formulae for the syrups, from which you will have no difficulty in making the corresponding liquors.

250/4. *Inquirer*.—There is no solvent for Portland cement which would not also dissolve the tiles.

175/11. *J. A. G.*—You will find the formula for Chabert's oil on page 763 of the last volume. Kamala has nothing to do with it.

220/14. *F. G. E.* (New York).—Thanks for your form ulas which are not, however, what was wanted.

246/52. *Stores*.—Formulas are given in THE CHEMISTS' AND DRUGGISTS' DIARY for making various antiseptic dressings, to which please refer. One of the simplest methods of sterilising the dressings after they are made is to tie the packet in tinfoil, closed at one end only, then place it in a sterilising-oven, and, after the prescribed period, take it out and close the open end.

246/50. *T. & T.* (Hobart).—The "Fat" Oil of Turpentine used in china-painting is oil of spike lavender, but French oil of turpentine which has become syrupy through age does equally well. The oil of spike lavender is the better for being old also.

246/59. *Male Fern*.—You will find a formula for Worm-syrup, with full directions, in our issue of May 11, 1895, page 672.

247/36. *Nelson*.—We may be better able to advise you if you submit the complete formula, which need not be printed if you expressly wish it not to be.

250/12. *Fix*.—Ammoniacal solution of carmine, cardinal, magenta, and Bismarck-brown synthetic dyes are amongst the dyes used for Colouring Sausage skins.

252/9. "79/0 *Subscriber*" does not send his name and address. It would have been better for him to have given these and omitted the factitious number.

251/68. *R. H.*—(1) Melin's capsuling-machine, which is advertised in the *C. & D.* and in the DIARY, will suit your purpose. (2) "The Iford Manual of Photography" and Perken, Son & Rayment's 6d. book are suitable for beginners.

252/86. *J. T.*—As far as we are aware, no. We would rather not report upon the articles. It is a kind of business which we have no desire to encourage more than we can help.

252/51. *Essex.*—Conf. Tamarind.—Dissolve 1 oz. of sugar and $2\frac{1}{2}$ oz. of manna in 5 oz. of warm water. Strain when cold, and mix with tamarind-pulp $1\frac{1}{2}$ oz., cream of tartar $\frac{1}{2}$ oz., powdered senna $\frac{1}{2}$ oz. The foregoing is probably what you want.

252/33. *Distilled Water.*—When cheapness is a desideratum, there is nothing better for distilling water than the old-fashioned tinned-iron still and worm, costing about 30s.; but you may be able to get one made locally for less. It is important to have the worm heavily tin-plated or made of block-tin pipe. Of the patent stills, Morris & Llewellyn's is about the best. See the description in *C. & D.*, August 29, page 342.

228/71. *Colour.*—Vegetable Colours.—Green is chlorophyll, violet is from pansies, rose is from cochineal (therefore not vegetable), and yellow is obtained from various sources.

238/58. *T. W. T.*—Modelling-wax.—We repeat a formula which we have published more than once:—A mixture of equal parts of beeswax, lead plaster, olive oil, and yellow resin, made into a paste with white bole.

240/43. *J. B. P.*—See the second article on "Röntgenography for Pharmacists."

228/43. *Cyrl.*—Black Varnish.—See pages 471 and 700 of current volume, and the DIARY.

229/13. *Petroleum.*—We must also refer you to the DIARY.

237/33. *Student.*—Cretæ precipitat. varies in density according to the method of precipitation, and can be obtained very light. Yours is the heavier variety.

241/17. *Brockley.*—(1) The liniment will be the better for the addition of a little wax. (2) See the 1897 DIARY, also in regard to No. 1.

239/29. *Exodus.*—The loofah is the vascular tissue of a gourd.

145/96. *Hull.*—(1) Lapis Tutæ is an old name for an impure oxide of zinc (tutty) which was obtained by sublimation. Calamine is generally given for it nowadays. (2) Yes; the book is in the press.

240/66. *J. A. G.*—You will find a formula for Chabert's oil in the Correspondence column of a recent issue.

240/70 *Bean.*—Cumarin-plants in Tobacco.—The leaves of *Liatriis odoratissima*, deer-tongue, a plant found plentifully in North Carolina and other Southern States, are rich in cumarin, the characteristic odorous constituent of tonca bean. The leaf is known to be largely used as a flavouring-agent by tobacco-manufacturers, and it is claimed that it has taken the place of tonca bean for this purpose. That, however, seems not to be the case, for the leaf cannot be used as a substitute for beans without injuring the old-established brands of manufactured tobacco. Deer-tongue makes a good filler in all grades of smoking-tobacco, and probably cigarettes. The bright yellow leaves, when granulated, make a fair comparison with tobacco of the same colour. Large quantities of deer-tongue are sold every year to American tobacco manufacturers, but English manufacturers are not permitted to use such things. It is not a competitor of tonca beans, but rather an agreeable accompaniment to tobacco.

240/72. *Ch. Chloroform Anæsthesia.*—From a record of cases reported the *Therapeutic Gazette* it appears that $\frac{1}{10}$ gr. sparteine sulphate, administered hypodermically before the commencement of anæsthesia, and repeated according to the nature of the operation and the condition of the patient, is a safe, efficient, and prompt heart-stimulant, and that the use of morphine along with it is unnecessary.

190/23. *G. C.*—Hair-bleach.—We are obliged to you for your information.

184/11.—*H. & S.*—Codd's Bottle-rings.—You will find a method for deodorising these described to a correspondent a few weeks since.

254/64. *Asthma.*—Asthma-powder.—The following makes a very good inhalant when burnt:—

Powdered stramonium-leaves	3ij.
Powdered conium-leaves	3ss.
Powdered sumbul-root	3i.
Powdered anise	5ij.
Powdered fennel	5ij.
Powdered nitre	3j.

Mix thoroughly.

254/69. *F. E. R.*—Marking-ink Formula.—Our correspondent makes this in the usual manner—viz., by precipitation of silver nitrate 1 oz. with sodium carbonate $1\frac{1}{2}$ oz. (a large excess), but finds silver "largely present" in the filtrate. We have had this complaint before, and cannot understand it; for, on precipitating a solution of silver nitrate with excess of sodium carbonate, filtering, and adding acetic acid to the filtrate, then hydrochloric acid, we get but a slight opacity, which is no more than we should expect from the relatively greater solubility of silver carbonate. A comparatively small trace of ammonia serves to dissolve silver carbonate, and this may account for our correspondent's result.

255/34. *Salol.*—Esbach's Albumin Test:—

Picric acid	10 grammes.
Citric acid	20 grammes.
Water to	1 litre.

Dissolve the acids in 900 c.c. of boiling water, and when cold make the solution up to 1 litre.

This solution is used with a special graduated tube, which may be obtained from Messrs. Southall Brothers & Barelay amongst others. A certain volume of urine is mixed with a volume of the above reagent, and after standing twenty-four hours the precipitate is read off, each degree being equal (approximately) to 0.1 per cent. of albumin.

118/35. *Dispenser* (West Indies).—Bleaching Beeswax.—The best method is air-bleaching, for which the wax must be specially prepared. Put a gallon of water in a pot and bring to the boil; into this place 10 lbs. of the wax to be bleached, and when it is melted add 2 oz. of sulphuric acid. Mix well and allow to cool. Now remove the wax, and again melt in 2 gallons of boiling water, mixing thoroughly so as to wash out adhering sulphuric acid. The wax must now be converted into thin ribbons. This is done on the large scale by a peculiar apparatus consisting of a trough and cylinder so arranged that the wax leaving the trough is taken up in thin layers by the revolving cylinder, and transferred to cold water. Failing this, you may use any convenient sheet of iron or copper just large enough to dip into the pan of melted wax, dipping it immediately after into a trough of cold water, so getting thin sheets which can easily be removed by a large knife. These sheets are to be laid out and exposed to the air for eight days or more, turning them every day until they are white. Then remelt them and mould into cakes. Bleaching is also done by chemical methods, but the white wax so produced is not so good as that obtained by air-bleaching.

255/4. *Hemidesmus.*—Percentage Solutions.—We do not know what rule the Boards of Examiners recognise in making such solutions; individual opinion probably prevails. In making lotions and the like the fluid-grain basis is undoubtedly the more correct one to adopt. Take, for example, a 2-per-cent. carbolic-acid lotion. A man who has to make 100 oz. will take 2 fl. oz. of the acid, and 98 oz. of water; and one who has to make 20 oz. reckons the pint into minims and takes 5ij. mxij. of the acid—getting exactly the same solution, 2 minims in 100 minims. If, on the other hand, a man has to make 500 oz. of a 1-in-500 mercuric-chloride solution, he uses 1 oz. of the chloride and water to make 500 oz. This is the fluid-grain basis, for if you reckon out the quantities you will find that the strength is 1 gr. in 550 minims (nearly). If, therefore, you are to make a small

quantity on the minim basis you get a much stronger solution. Except in the case of hypodermic solutions, which are to be administered in minims, you may adopt the following rule with the certainty of being always right:

Percentage solutions of liquids in liquids should be made upon the minim basis, and in percentage solutions of solids in liquids, the liquid should be taken upon the fluid-grain basis.

This rule applies for countries following English and American customs. On the Continent liquids as well as solids are weighed. If the fluid-grain basis is not adopted in solutions of solids there is the probability of compounding on the wholesale and retail scales differing as long as avoirdupois weights and measures are used.

254/5. Microscopic.—Books on Microscopic Mounting.—Mr. P. W. Squire's "Methods and Formulæ" (Churchill, 3s. 6d.) is almost indispensable, but does not pretend to treat the mechanical work fully. For that consult Davis's "Practical Microscopy" (W. H. Allen & Co., 7s. 6d.), or Charters White's "Microscope and How to Use it" (R. Sutton & Co., Limited, 11 Ludgate Hill, E.C., 2s.). The last-named book is for beginners.

256/27. Cir.—Tincture of Cudbear (tr. persionis).—The formula for this is given in the tincture-table, *C. & D. DIARY*, page 485.

256/12. A. R.—Horse Tice.—Your formula beats us, but we give it to see what the ingenious amongst our readers think of it:—

2d. horse stinchor
2d. amhor
2d. halder

It is calculated to make the mare to go, no doubt.

257/58. Puzzled.—Extract of Balm of Gilead Buds is an extract of the buds of *Populus candicans*, a variety of the balsam poplar, or Tacamahac, a tree found in Canada and the northern parts of the United States. It is used for disorders of the mucous membrane, such as gonorrhœa.

257/66. Omum Carpoor.—We thank you. A reply to the query was subsequently published.

257/17. Verax (Genoa).—Perfumed Carbolic Acid:—

Carbolic acid	..	..	..	..	..	3ij.
Rectified spirit	..	..	..	..	..	3ij.
Oil of bergamot	..	..	..	..	..	℥xx.
Oil of wintergreen	..	..	..	..	..	℥x.
Oil of citronella	..	..	..	..	..	℥x.
Water to	..	..	..	..	..	℥xxiv.

Mix the oils and acid in the spirit, add the water and $\frac{1}{2}$ oz. of fullers' earth, shake well, and filter.

257/32. W. M. A.—To Destroy Ants.—We have used paraffin with success; benzene is better.

257/40. Lenox.—Book on Bacteria.—Dr. Sims Woodhead's "Bacteria and their Products" (Walter Scott, 3s. 6d.)

259/69. J. Brooks.—Shampoo-powder.—See vol. xlix., pages 700 and 807.

198/18. Tablet.—Three grains of quinine hydrochlorate is put in each tablet.

259/47. Phœnix.—Nurses Wanted.—If you cannot get a supply of nurses from the institutions mentioned in the *DIARY*, advertise in the *Hospital* (Nursing Supplement), 28 Southampton Street, Strand, W.C.

259/63. Cymro.—Infants' Food Formula.—See *C. & D.*, May 9, 1896, page 679.

262/67. Major.—To advise you to any purpose about what sort of business to buy, and whether to buy an old one or start a new one, would require much more space than we can possibly give. A great deal depends on what you are specially fit for. Your best course, we should think, would be to discuss the matter fully with an experienced transfer agent, and let him look out for you. Perhaps a partnership with a view to succession would be a suitable arrangement. Certainly you must be prepared, if you mean to succeed, to meet modern competition.

INFORMATION WANTED.

The Editor will be obliged for replies to the following from any who can furnish the information.

2/61. Alboline: maker or agent wanted.

258/52. Acidine: who are the makers?

262/65. Address of the makers of "Perfection" cinemas.

248/53. *F. M.* wishes to know if any extra charge for water-supply is made by local authorities or water companies to chemists. He is charged 30s. for his shop, the rate for a plunge-bath being 10s. In our opinion he gets off cheap, but what do others say?

Coming Events.

Notices of Association and Society Meetings will be inserted in this section free of charge if we receive intimation of such meetings by Wednesday of the week previous to that in which the meetings are to be held.

Monday, January 4.

Society of Chemical Industry (London Section), Chemical Society's Rooms, Burlington House, at 8 P.M. The following papers will be read:—(1) "The Smelting and Refining of Cyanide Bullion," by Arthur Caldecott, B.A. (2) "The Industrial Use of a Recording Pyrometer," by Professor Roberts-Austen, C.B., F.R.S.

Tuesday, January 5.

Ulster Pharmaceutical Association, I.O.F. Chambers, 5 Royal Avenue, Belfast, at 8 P.M. Mr. S. Templeton, Assoc. R.C.Sc., F.I.C., on "Adulteration."

Thursday, January 7.

Liverpool Pharmaceutical Students' Society, University College, at 8.30 P.M. Mr. John Turcan on "A Tour in North Wales" (with lantern-slides).

Glasgow and West of Scotland Pharmaceutical Association, 94 West Regent Street, at 9.15 P.M. Mr. James Robb will lecture on "Botany as a Recreation." It has been arranged that the annual *société*, to be held in the Cockburn Temperance Hotel on February 4, will take the form of a *conversazione* and dance.

P. A. T. A. meeting at the Royal Institution, Colquhitt Street, Liverpool, at 3 P.M., under the auspices of the Liverpool Chemists' Association.

Friday, January 8.

Aberdeen Junior Chemists' Association, 21 Bridge Street, at 9.30 P.M. Dr. C. Ritchie on "Hypnotism."

Chemists' and Druggists' Society of Ireland (North Branch), Belfast, at 8.30 P.M. Discussion on "Trade Prices," to be opened by Mr. W. J. Rankin.

Sheffield Microscopical Society, Rutland Institute, Chapel Walk, at 8 P.M. Dr. Hunt on "Micro-organisms and Their Relation to Disease."

Pharmaceutical Chemists' and Apothecaries' Assistants' Association of Ireland, 67 Lower Mount Street, Dublin, at 8.30 P.M.

Manchester Pharmaceutical Association.—On Wednesday, January 13, a lecture, entitled "From Mont Blanc to the Matterhorn," will be given by Mr. W. L. Howie, F.C.S., in the Memorial Hall, Albert Square. The lecture will be illustrated by lantern-slides. Chair to be taken at 7.30 P.M. by Mr. G. S. Woolley (President). Admission free, and all interested in the subject of the lecture are invited.

The Chemists' thirty-first annual ball will be held at the Portman Rooms, Baker Street, W., on Wednesday, January 20. Tickets—lady's, 12s. 6d.; gentleman's, 17s. 6d. (including refreshments, supper, and wine)—can be obtained from the Hon. Secretary, Mr. John C. Umney, 48 and 50 Southwark Street, S.E.

P. A. T. A. meeting will be held at the Religious Institution Rooms, 200 Buchanan Street, Glasgow, on Jan. 12, at 11 A.M.

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- 164 Pulv. Ipecac. Co.; Pulv. Gum. Ammon. aa. gr. iss.;
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- 167 Pulv. Ipecac.; Pulv. Scillæ aa. gr. ⅔; Pulv. Capsici; Pulv.
Opii aa. gr. ⅔; Pulv. Gum. Ammon.; Ext. Conii aa. gr. i. 8d. ... 7d. ... 5/6 ... 4/9

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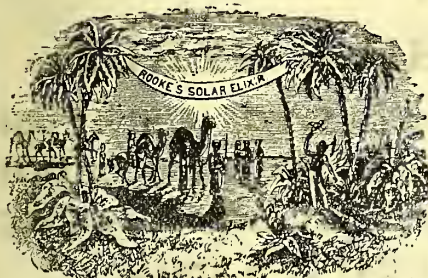
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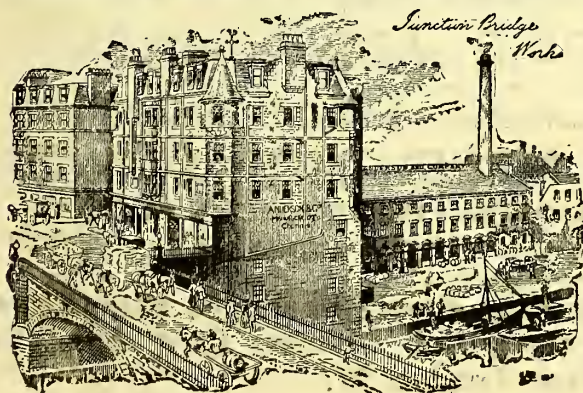
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All Chemists, Druggists and Stores should stock this new article, which is well advertised, and is a really good speciality. It is put up in collapsible tubes, Retail Price 1s., and can be obtained from any Wholesale House.

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The Proprietors of the above well-known Pills have decided in the interest of the Retail trade to stop all further cutting and allow a reasonable profit, and in so doing hope to secure the goodwill and co-operation of all respectable Chemists and Druggists.

A GOOD PILL and GOOD PROFIT.

1/1½ size	...	...	...	...	Wholesale Price, 10/- per dozen.
"	"	...	...	...	Minimum Retail Price, 1/- „ box.
2/9	„	...	...	...	Wholesale Price, 24/- „ dozen.
„	„	...	...	...	Minimum Retail Price, 2/6 „ box.

NO TROUBLE ABOUT AGREEMENTS.

The proprietors will be obliged if Chemists will report all cases of Cutting to

**THE SECRETARY, PROPRIETARY ARTICLES TRADE ASSOCIATION,
2 and 3 STONECUTTER STREET, E.C.,**

who will see that the Cutting is stopped or supplies withheld.

Messrs. LAMBERT & CO. will be pleased to supply Handbills, with Name and Address, CARRIAGE PAID, on receipt of Business Card direct to
173 Seymour Place, London, W.

"ZEMATONE"

ASTHMA POWDER AND
ASTHMA CIGARETTES.

THE MOST SUCCESSFUL OF ALL PREPARATIONS.
EXTENSIVELY ADVERTISED.

Highly Recommended by the Medical Profession.

Samples of the Powder for Counter Distribution sent, carriage prepaid, to all Chemists and Dealers by

O. FANYAU & CO., 90 Great Russell St., LONDON, W.C.

For Sale by all Wholesale Chemists and Patent Medicine Houses.

**STANDARD
BRAND
MALT
EXTRACT**

**3 TIMES STRONGER
THAN ANY OTHER BRAND.**

LANCET says: "Possesses a remarkable
degree of digestive activity."

SAMPLES WILL BE SENT POST FREE
TO THE MEDICAL PROFESSION, QUALIFIED
NURSES & CHEMISTS ON APPLICATION.

STANDARD MALT EXTRACT CO. LTD 21, WATER ST. LIVERPOOL

Local
Rates and Taxes
are Heavy.

WHY PAY THEM?

A CHEMIST WRITES, NOV. 7, 1896.

"I am pleased with your goods, and the
advantage I get by dealing with you
PAYS MY RATES.

"Yours faithfully,
(Signed)

To W. Kemp & Son, Horncastle."

Complete Prices Current on Application. Samples Free.

W. KEMP & SON,

Wholesale Druggists,
Manufacturing Chemists, Drug Grinders and Importers,
HORNCASTLE.

"EDME" MALT EXTRACT.

RICHEST IN DIASTASE.

PURITY GUARANTEED. PRODUCED FROM ENGLISH-MADE MALT.

ALSO COMBINED WITH

COD LIVER OIL & HYPOPHOSPHITES.

In bulk and in attractive Capsuled Bottles.

IN CASES OF 3 DOZEN, CARRIAGE PAID—

							Siz s	$\frac{1}{2}$ lb.	1 lb.	2 lbs.	
MALT EXTRACT	...	...	...	...	...	...	...	6/-	10/6	19/-	per doz.
"	and Cod-liver Oil	...	...	...	...	...	...	7/6	12/-	21/-	"
"	" Hypophosphites	...	...	...	...	...	...	7/6	12/-	21/-	"

SPECIAL QUOTATIONS FOR LARGER QUANTITIES.

ENGLISH DIASTASIC MALT EXTRACT CO., LIM.

WORKS AND MALTINGS (*largest in England*)—

MISTLEY, ESSEX.

AGENTS FOR MIDLAND DISTRICT—MESSRS. SOUTHALL, BROS. & BARCLAY, BIRMINGHAM.

B. KÜHN, 36 ST. MARY-AT-HILL, LONDON.—SPECIAL LINES.



REGISTERED TRADE MARK.

CHINOSOL.—The most efficient Antiseptic and Disinfectant. Chinosol supersedes *Corrosive Sublimate*, *Iodoform*, and *Carbolic Acid*. It is *non-poisonous*, *non-corrosive*, *readily soluble*, and acts as a *powerful deodorizer*. Invaluable in Surgery, Midwifery, Dermatological and Dental Practice.

Chinosol is retailed in Powder at 1/- per bottle; in Tablets at 1/- per tube of 14 \times 15-grains.

Chinosol Fluid is indispensable in all cases where a prompt and effective *germicide* and *deodorizer* is required; it can be employed as a spray in the sick-room, or for washing floors and walls of Hospitals, Public Institutions, Ships' Decks, &c., &c. It leaves *no slippery surface*. Retailed in bottles of 1/-, 2/6, 4/6, and 7/6, making an efficient solution of 5-25, 12-60, 25-125, and 50-250 galls.

Sold by all Wholesale Druggists and Retail Chemists, or where not obtainable apply direct to
B. KÜHN, 36 ST. MARY-AT-HILL, LONDON, Sole Agent for Great Britain, British Colonies, and Dependencies.
LITERATURE AND DIRECTIONS SENT ON APPLICATION.

LOFTHOUSE & SALTMER.

MANUFACTURING CHEMISTS, WHOLESALE & EXPORT DRUG MERCHANTS, HULL.

Manufacturers of Granular Effervescent Preparations. We shall be glad to give specially favourable quotations, and send samples of our superior Nos. 1, 2, and 3 qualities of **CITRATE OF MAGNESIA**.

Importers of Cod-liver, Castor, and Olive Oils; Extra Super Essence of Lemon and Bergamot, Otto de Rose, and all



Essential Oils; Valentia Saffron; Vanillas; Fruit Essences; Carmine, Aniline Dyes; Bees' Wax, &c., &c.

MANUFACTURERS of Very Superior Flexible Gelatine Capsules of Balsam Copalba, Cascara Sagrada, Castor Oil, Cod-liver Oil, Santal Oil, and Bland's Pill Capsules, equal to 1, 2, and 3 pills. Samples and Lowest Quotations per 1,000, or in Boxes for Retail, will be sent on application from either the Wholesale or Retail Trade.

SPECIAL NOTICE TO THE TRADE.

In re **POTTER'S "DATURA" ASTHMA CURE.**

WE give at the foot of this page a list of some of the papers in which we are now, at great expense, advertising this remedy. In consequence, we daily receive great numbers of applications for Free Samples, and (though we enclose a note asking the applicant to get the 1/- tins through the trade) these are often followed up with orders enclosing the Retail price, plus postage.

It has always been our practice to refuse to execute Retail orders, but when applicants report their inability to procure the Asthma Cure in the locality, we are bound to supply them.

The following is a copy of a letter received recently, and is a type of many others :—

"The sample you so kindly sent has done me so much good that I shall be glad "if you will forward me a tin of the same. I consider it a most wonderful remedy. "I have tried many things, but none have given the speedy relief and ease that "this has. I have tried our local Chemists, but cannot obtain your 'Datura' Asthma "Cure."

On receipt of this we corresponded with the local Chemists, who have agreed to stock the line for the future, and we have referred the applicant again to them.

All the Wholesale Sundriesmen keep our goods, but to those who prefer writing us direct, we will send 1 doz., *carriage paid*, at 9/- per dozen, and at the same time will forward a good supply of Free Samples, Showcards, &c.

POTTER & CLARKE.

60, 62, and 64 Artillery Lane, London, E.

POTTER'S "DATURA" ASTHMA CURE is now being advertised in the Christian Commonwealth, British Weekly, Christian Herald, Sunday School Chronicle, Methodist Recorder, Christian Age, Christian World, Sunday Companion, Reynolds' Newspaper, Lloyds', Happy Home, Home Chat, Home Notes, Home Milliner, Stead's Id. Novels, Kentish Express, Woman's Life, Family Doctor, Great Thoughts, Strand Magazine, Modern Society, Temperance Companion, and 70 or 80 other periodicals.

“WILLARDBELL” TRUSS

(Patented in the United Kingdom and the Continent.)

An Entirely New Principle. Succeeds where all others fail. Guaranteed to hold any Rupture.

SCIENTIFIC.

SUCCESSFUL.

UP-TO-DATE

APPLIANCE.

Can be bent or re-shaped without heating or injuring the springs.

See next week's

No part of the Truss rests over a bone. Retains its position under all circumstances.

This Truss is so constructed that the Spring rises over the Hip Bones, leaving their movement unencumbered, thereby producing a direct pressure over the Hernia, and obviating any injurious pressure on the back. Infants invariably cured, as they cannot kick it out of position.

Other Specialities:—The “Willardbell” Elastic Web Trusses, “Willardbell” Suspensory, “Willardbell” Jockstrap, “Willardbell” Ladies’ Sanitary Bandage, Abdominal Supports, Chest and Lung Protectors, Ladies’ and Gentlemen’s Shoulder Braces, Elastic Stockings, Knee Caps and Anklets, and other appliances.

NOTE.—We have no hesitation in bringing our Goods under your special notice, as they have already established a reputation amongst Doctors and Chemists as of superior quality, finish, and efficiency.

We shall be pleased to submit on application Prices and Testimonials in reference to our Goods, with any other information required.

Chemists who take up Agencies for our manufactures will considerably increase the yearly turn-over of their business. A large number of Agents have already been appointed in the United Kingdom.

We are well equipped for despatch of Export Orders, but wherever possible should prefer such to pass through the Shipping Agents in England.

MANUFACTURERS:—ACCRINGTON SURGICAL APPLIANCES CO., LIMITED, DALE STREET WORKS, ACCRINGTON. Telé. No. 76.

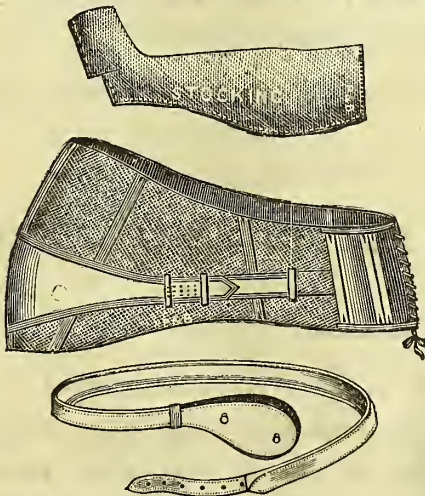
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Powell & Barstow

Makers of

**Surgical Instruments and
— Elastic Stockings.**

Ladies' and Gentlemen's Abdominal Belts, &c.



Trusses, Anklets, Leggings, Knee Caps, &c., &c.

Bandages, Bath Gloves, Chest Protectors, Cotton Wool, Druggists' Sundries, Lint, Rubber Goods, &c., &c.

Detailed Price Lists on Application.

58A Blackfriars Road, London, S.E.

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**ABSOLUTELY
RELIABLE.**



**TRADE PRICE
MODERATE.**

**SALE UPWARDS
OF 4,000,000.**

**A. LAMBERT & CO.'S
SOLUBLE**

QUININE TABLETS.

A soluble Quinine Pessary of proved absolute reliability. Upwards of 4,000,000 have been sold without a complaint of failure.

We have a list of Special Articles for Chemists which command a ready sale at large profits. A Copy on application post free.

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*Surgical Instrument and
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**ABDOMINAL, BODY, and other Supporting BELTS,
BANDAGES AND SURGICAL ELASTIC APPLIANCES.**

Descriptive Pamphlet with Particulars Post Free.

Apply Secretary, E. J. PRYSE, 35 Devonshire St., KEIGHLEY.

Ladies' and Gentlemen's Ordinary Belts from £1 1s.

AGENTS—Messrs. S. MAW, SON & THOMPSON, Surgical Instrument Makers, 7 to 12 Aldersgate Street, LONDON, E.C.; Messrs. REYNOLDS & BRANSON, Surgical Instrument Makers, 13 Briggate, LEEDS.

SPONGE IMPORTERS.

M. PETERSON & CO.

6 HOUNDSDITCH, LONDON.

FOR HOME, FOREIGN, & COLONIAL MARKETS.

MAW'S GELATINE CAPSULES.

	Containing	Per doz.		Containing	Per doz.
Cascara Sagrada, in round boxes ...	30	6/-	In oval screw-cap bottles	36	7/9
Cascara Sagrada, stronger, in round boxes ...	30	7/6	Ditto ditto	„	9/-
Castor Oil, in square boxes ...	36	5 -	Ditto ditto	„	6/3
Cod Liver Oil, in square boxes ...	36	6/-	Ditto ditto	„	7/3
Copaiba, with or without Name, best, in oval boxes ...	36	5/3	Ditto ditto	„	6/9
Copaiba, Flexible, in oval boxes ...	36	5/6	Ditto ditto	„	7/-
Copaiba, Flexible, larger, in oval boxes ...	36	8/-	Ditto ditto	„	9/6
Copaiba and Cubeb, in square boxes ...	36	8/-	Ditto ditto	„	9/3
Copaiba, Cubeb, and Buchu, in oval boxes ...	36	8/6	Ditto ditto	„	10/-
Copaiba, Cubeb, and Sandal-wood Oil, Flexible, in oval boxes...	36	13/-	Ditto ditto	„	14/6
Creasote, m i., in square boxes ...	36	7/-	Ditto ditto	„	8/3
Ditto m ij., ditto ...	36	7/6	Ditto ditto	„	8/9
Guaiacol, m i., ditto ...	36	10/-	Ditto ditto	„	11/3
Ditto m ij., ditto ...	36	11/-	Ditto ditto	„	12/3
Oil of Male Fern (10 minims), in square boxes ...	36	12/-	Ditto ditto	„	13/3
Sandal-wood Oil, Flexible, English, in round boxes ...	30	15/-	Ditto ditto	„	19/-
Tar, Norwegian, in square boxes...	36	5/6	Ditto ditto	„	6/9
Terebene, pure (10 minims), in round boxes ...	30	7/-	Ditto ditto	„	8/6
Turpentine, in square boxes ...	36	5/-	Ditto ditto	„	6/3

MAW'S MENTHOL CONES

REDUCED PRICES.

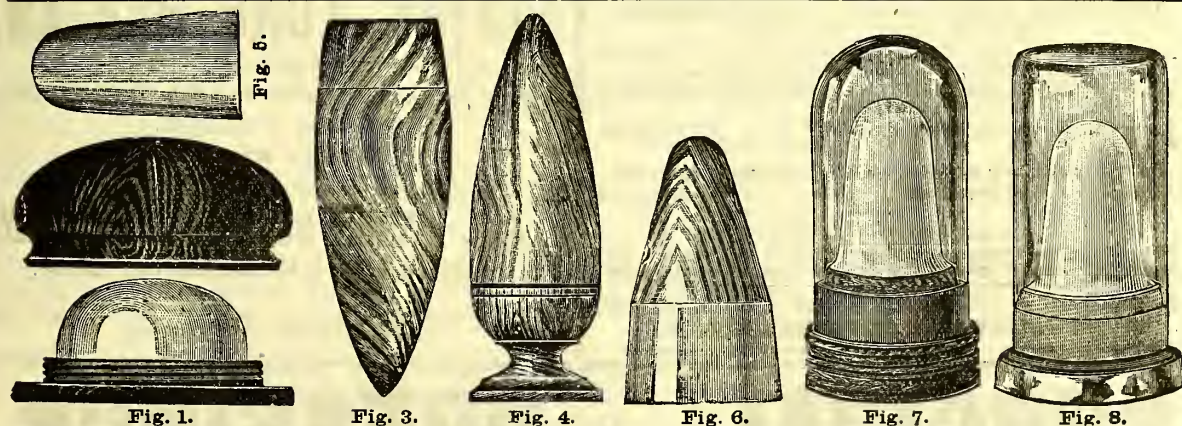


Fig. 1.—In Ebony Cases, flat for the pocket ...	per doz.	4/9
Fig. 1.—In Boxwood Cases ditto ...	per doz.	2/9, 3/3, and 6/-
In Celluloid Cases ditto ...	„	3/9 and 7/-
Fig. 3 & 4.—In Boxwood Cases ...	per doz.	1/9, 2/-, 2/9, 3/3, and 6/-
Fig. 3.—In Boxwood Cases, with Reversible Screw ...	per doz.	3/3
Fig. 5.—In White Opaque Glass Jars, with Red Celluloid Caps ...	„	2/2 and 3/3
Fig. 5.—Mounted, in Stoppered Bottles ...	„	6/9
Fig. 6.—Mounted on Vegetable Ivory, in Glass Bottles, Screw Metal Caps ...	„	4/-
Fig. 7.—On Glass Mounts, Glass Covers ...	„	3/- and 4/3
Fig. 7.—On Earthenware Mounts, Glass Covers...	„	4/6 and 6/9
Fig. 8.—On Glass Mounts, with Glass Covers ...	„	5/3

S. MAW, SON & THOMPSON, LONDON.



BOTTLES

NEW DESIGNS FOR
SPECIALITIES.

WAREHOUSE—
EAST INDIA DOCK, E.

OF "HIGH FINISH."

INSPECTION OF SHOWROOM INVITED.
(15 HIGH-CLASS GLASS WORKS.)

JOHNSEN & JORGENSEN.

REASONABLE PRICES.

Samples on application.

Offices & Showrooms—Botoiph House,
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FEEDING BOTTLES

OF THE BEST MANUFACTURE.

PRICES REDUCED.

These are fitted with BEST QUALITY RUBBER ONLY, and are thoroughly Reliable.
TRY THEM. THEY SELL WELL.

A Trial Order
Solicited.



E. YOULDON (Established 1840), 36, 38, & 40 Great Garden Street, LONDON, E.

DISPENSING BOTTLES.

THE NORTH LONDON GLASS BOTTLE COMPANY
(I. ISAACS & CO., Proprietors)

Do to inform the Trade that they have made a further reduction
in the price of their Bottles, as follows:—

The NEW SHAPE FLAT BOTTLES, with rounded edges, plain
or graduated—

3 & 4 oz. ~ 7/6 per gross. | 10 & 12 oz. ~ 12/- per gross
6 " " ~ 5/6 " | 16 " ~ 16/- "

WHITE MOULDED PHIALS, plain or graduated Teaspoons—
1 oz. ~ 3/6 per gross. | 1 1/2 oz. ~ 4/6 per gross
1 " ~ 2/9 " | 2 " ~ 5/- "

PLEASE NOTE.

Six gross and upwards, assorted or otherwise, are carriage paid
to any address in England; smaller quantities not carriage paid.

I. ISAACS & CO., Glass Bottle Manufacturers,
108 MIDLAND ROAD, ST. PANGRAS, LONDON.

Established 60 years

Rankers—London and Westminster Road

All Chemists, Druggists, and Stores should stock

ATKINS' LUNG HEALER,

which is being well advertised, and is a good

Remedy for Coughs, Colds, Asthma, Bronchitis, and
all Chest Complaints.

IT CONTAINS NO POISON.

MANUFACTURED ONLY AT

R. & G. ATKINS' HERBAL LABORATORY,
118 FALCON ROAD, CLAPHAM JUNCTION, LONDON.

Sold in Bottles at 1/- and 2/6 each. Obtainable from any
of the WHOLESALE HOUSES.

SURGICAL

ABSORBENT
COTTON LINTS,
FLAX LINTS,
ROLL BANDAGES,
COTTON WOOLS.



DRESSINGS.

"GAMGEE TISSUE"
(Patent Absorbent Gauze and Cotton Wool)
AND

All kinds of
ANTISEPTIC
DRESSINGS.

MANUFACTURED BY
ROBINSON & SONS, COTTON SPINNERS, WEAVERS, And BLEACHERS, Wheat Bridge Mills, CHESTERFIELD,
LIMITED.

And 55 Fann Street, Aldersgate Street, LONDON, E.C.

LATEST NOVELTY NEW YEAR WANTS

IN

A 1

MENTHOL

3/6

PER DOZ.

Stand included.



CONES!!!

Very Attractive
for Counter
Will Increase
your Sales.

EVERY Chemist should at once order a dozen (No. 47) "Castle" shape Menthols, and secure one of these Stands. The boxwood cases pack away inside the body of the Castle. When Menthols are sold it will be found most useful for showing your own Specialities. With every dozen we give a Stand, so order two or three and you will find them most useful in other ways. So long as you show the Cones on one stand we don't mind how you utilise the others.

Of all Sundries Houses, and of the Manufacturers—

SHIRLEY BROS.

WHITECROSS STREET, LONDON, E.C.

A

BSORBENT WOOL, per lb., 9½d., 1s., 1s. 2d.

Paper, white demys, 15 lb., 4s. 6d.; 17 lb., 5s.
Readng Eye Shades, per dozen 4s. 6d.
Oiled Silk, best, per yard 3s. 3d.
Seidnitz Powders, B.P., per gross 5s. 6d.
Perfumery, the finest, 1d., 2½d., 3½d., 6d., and 1s.
Roar Trumpets, from 1s. 6d. each.
Orazor Strops, from 6s. dozen.
Rintment Introducers, each 1s. 6d.
Orethra Syringes, from 3s. 6d. dozen.
Syringes, glass, best quality.

Nursing Aprons, from 1s. each.
Enemas, from 20s. dozen.
Waterproof Sheetng, from 1s. 6d. yard.

Yeo's Inhalers, per dozen 4s.
Elastic Stockings, &c.
Asthma Relievers, per dozen 7s.
Respirators, from 5s. dozen.

BARCLAY & SONS, 95 Farringdon St.

DR. MEHRLAENDER & BERGMANN, HAMBURG.

ESSENTIAL OILS.
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 FRUIT ESSENCES.
 SOLUBLE ESSENCES.
 SOAP COLOURS.

Distillers & Importers of

ESSENTIAL OILS.

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ESSENCES & SOAP COLOURS.

Write for Price List & Samples to

DELBANCO & CO., 9 MINCING LANE, LONDON, E.C.

Sole Agents for the United Kingdom.

ROGERS & CO.

MEDICAL BOX TURNERS,

Turners of every description of Tooth Powder, Plate Powder, Pill and Puff Boxes, used by Chemists, Perfumers, &c.

[Price Lists on application.]

INVENTORS AND MANUFACTURERS OF THE PATENT


SILICATED GREASE PROOF BOXES.



PINCUSHION PUFF BOX.



Manufacturers of the Tonic Cups and Goblets.

A perfect substitute for covered pots. These boxes are made of white wood, silicated inside, rendering them quite grease-proof, and will be found very convenient to send by post. They are very light, being one-sixth the weight of covered pots. They are not breakable. The lids fit quite air-tight. They are made to stand any climate. These boxes have been used over 20 years, and have always given the greatest satisfaction. Each box is stamped on the bottom with our registered stamp thus 



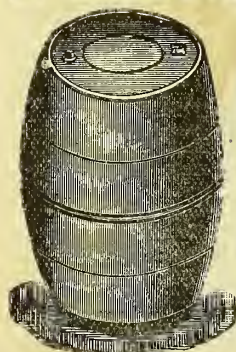
Registered No. 5,132.

Shippers & Large Buyers.

Special Quotations on application.

CARTER STREET, WALWORTH, LONDON.

CAIRD'S STAMPED STEEL BARRELS



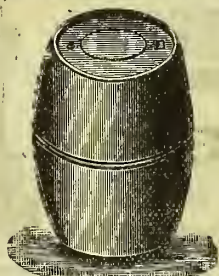
Are less Dangerous than
Wood Barrels.

NO COOPERAGE, NO LEAKAGE, NO LOSS BY EVAPORATION.

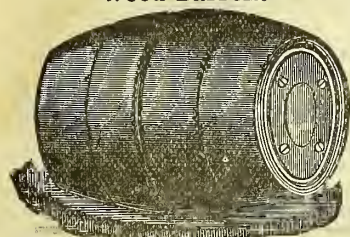
For Carrying and Storing
Chemicals, Spirits, Acids, Varnishes, Oils,
and Other Liquids.

ALSO

White Lead, Paints, Resin, Gums,
Wax, Soft Soap, and other Dry or Semi-
Liquid Goods.



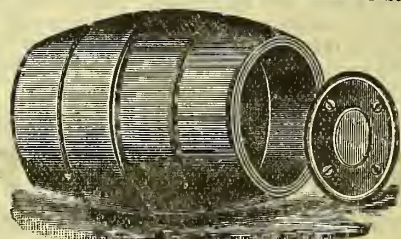
Occupy Less Space,
are Stronger
and more Durable
than Wood Barrels.



CORRESPONDENCE INVITED.

SOLE MANUFACTURERS,
IRON & STEEL PLANT CO
LIMITED,
3 Crown Court, Old Broad St.,
LONDON, E.C.

WORKS—Barrow-in-Furness.



BENNETT, SONS & SHEARS LIMITED,

Engineers, Coppersmiths, and Millwrights,

167 Kingsland Road, LONDON.

Telegrams—"COPPERSMITHS LONDON."

ESTABLISHED OVER 100 YEARS.

IMPROVED PILL-MAKING PLANT INCLUDING

Mass Mixers, Rotary Pill Cutters, Pipers,
Rounders, Coaters for Pearl, Sugar, and
Gelatine Coating, Pill Counters, and every
appliance requisite for Pill-making in large
or small quantities.

**IN USE BY THE PRINCIPAL PILL-MAKERS
THROUGHOUT THE WORLD.**

CIRCULARS AND PRICE LISTS ON APPLICATION.

Manufacturers of all descriptions of

**PANS, STILLs, PRESSES, MILLS,
and LABORATORY PLANT.**

CARDBOARD

FOLDING BOXES

For BOTTLE PREPARATIONS requiring to be well presented;
and for neatly packaging Tablets, Lozenges, Powders, &c.
Each box printed from design, in one or several colours. Also
in plain, neat type arrangements. All of best class work.

DESIGNS MADE IN HIGHEST ARTISTIC STYLE
Estimates free, on sending details, such as size, largest likely
quantity, wording for front, &c. Correspondence invited.

KINROSS & BLACK, PRINTERS, EDINBURGH

Large numbers at specially favourable rates.

Registered

Trade Mark,
130,842.

'AREMA' Specialities! As used
in the
London
Chest
Hospitals.

'AREMA' Vaporiser,
5s. and 10s. 6d.

'AREMA' Inhalants,
1s. 9d., 3s., and 5s. 6d. Nos. 1, 2, 3, 4 and 5.

12 Hours. 'AREMA' Lights.
1s. a Box.

From all Wholesale Houses, or direct from
The 'AREMA' MANUFACTURING COMPANY,
20 Victoria Chambers, 55 & 56 Chancery Lane, W.C.
WRITE FOR PAMPHLET. AGENTS WANTED.

J. SANGER & SONS

Beg to call attention to the following Seasonable Articles, and would solicit trial orders.

EARTHENWARE FOOT WARMERS—

Brown Stoneware, with Screw Stoppers, four sizes, each 1/2, 1/6, 1/9, and 2/-.

DOULTON'S PATTERN, 2 pints, each 1/6; 3 pints, each 1/8.

TIN FOOT WARMERS—

Per doz. 27/-; cheap kind, oval shape, per doz. 9/-

BRONCHITIS KETTLES—

3½ pints (wide spouts, 16/-), per doz. 14/-

5 " (" " 20/-), " 17/6

7 " (" " 23/-), " 21/-

3 " **COMMON** (complete doz. 9/6), per doz. 10/-

COMMON OVAL, per doz. 10/6.

All the above prices are subject to 10 per cent. and 5 per cent. monthly account.

GLYCERINE PASTILLES—

Per lb. 1/9, net 1/6; 7 lbs. for 11/8, or 1/5 lb. net. Glycerine and Black Currant, Delectable, Voice, &c. (7 lb. quantities, assorted, 1/9 or 1/6 net), per lb. 1/10, net 1/6½.

DIGESTIVE CANDY (Peptonised)—

(7 lbs. for 10/9, net 9/2¼), per lb. 1/9, net 1/6.

EUCALYPTUS ASTHMA CURE—

1/- Tins, no name on labels, per doz. 9/-, net 7/8½; 3 doz. (customer's name on label), per doz. 8/9, net 7/5½.

LICORICE, LINSEED, and CHLORODYNE LOZENGES—

7 lbs. for 6/3, net 5/4; 14 lbs. for 12/6, net 10/8½; 28 lbs. for 24/6, net 20/11¼; 56 lbs. for 48/-, net 41/0½; 112 lbs. for 94/-, net 80/4½.

These can be highly recommended, quality and finish being Ar.

SHOW BOWLS and SHOW CARDS given with orders for 7 lbs. Candy or 14 lbs. Licorice, Linseed, and Chlorodyne Lozenges.

Warehouse and Showroom—2 WINSLEY STREET, LONDON, W.

Do you require Petroleum Jelly?

If so, SNOWDON'S PETROLEUM JELLY, White or Yellow, is the best and purest obtainable. It fulfils all the requirements of the B.P., is pronounced by the Medical Profession to be unsurpassed, and DR. S. RIDEAL, D.Sc. Lond., F.I.C., F.C.S., states that the various kinds are of "uniform good quality."

Have you seen our New Speciality in Petroleum Jelly?

The "SNOWDRIFT" (Regd.) BRAND is of a tough or stringy consistency, and is highly commended by *The Hospital*, which says of it "That its tough or stringy nature is a great improvement. We learn that already the demand for the "Snowdrift" Brand is very great. It is cheaper than ordinary vaseline, and we confidently recommend it to the Medical Profession." Samples and Prices will be sent on application.

Send for a Sample of "Snowdrift."

Address SNOWDON, SONS & Co., Millwall, London, E.

Telegraphic Address: "SNOWDRIFT, LONDON."

Telephone: 5127.

WILEY'S CHEMICAL ESSENCE

FOR

LAMENESS IN HORSES.

HANDEILLE, WITH NAME & ADDRESS, SUPPLIED GRATIN.
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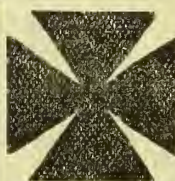
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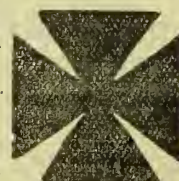
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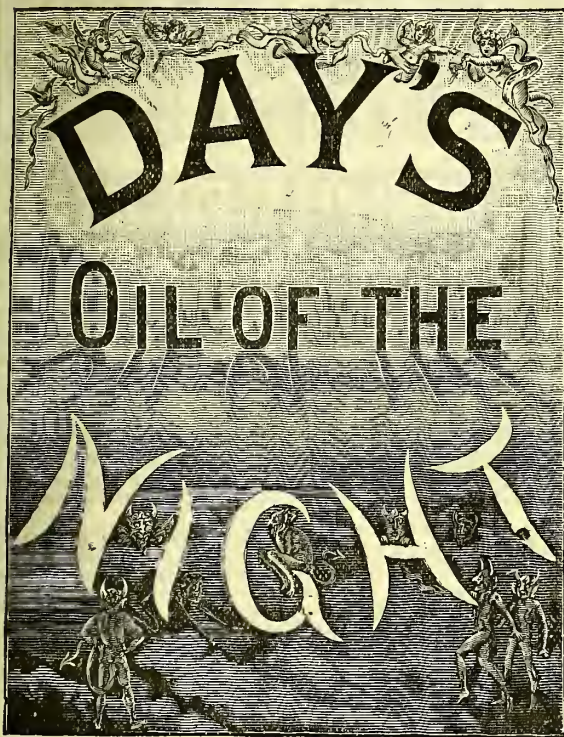
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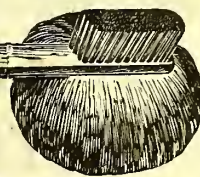
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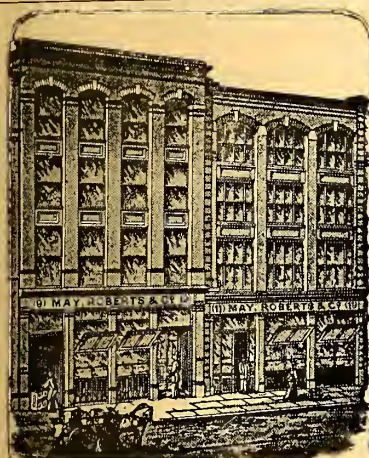
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Fig. 2.



Fig. 3



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